2005/2006: Report 1

OFFICE OF THE

Auditor General of British Columbia

Follow-up of the recommendations of the Select Standing Committee on Public Accounts contained in its Fourth Report of the 3rd Session of the 36th Parliament: Earthquake Preparedness; Performance Audit

May 2005

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Library and Archives Canada Cataloguing in Publication Data

British Columbia. Office of the Auditor General.

Follow-up of the recommendations of the Select Standing Committee on Public Accounts contained in its fourth report of the 3rd session of the 36th Parliament: Earthquake preparedness; Performance Audit

(Report ; 2005/2006: 1)

Running title: Follow-up of Emergency preparedness in British Columbia.

ISBN 0-7726-5223-6

1. Earthquakes - British Columbia - Safety measures - Evaluation. 2. Emergency management - British Columbia - Evaluation. 3. Disaster relief - British Columbia - Evaluation. I. British Columbia. Legislative Assembly. Select Standing Committee on Public Accounts. Earthquake preparedness in British Columbia. II. Title.

III. Title: Follow-up of Earthquake preparedness in British Columbia. IV. Series: British Columbia. Office of the Auditor General. Report ; 2005/2006: 1.

HV551.5.C3B74 2004 363.34'957'09711 C2004-960120-2

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The Honourable Claude Richmond
Speaker of the Legislative Assembly
Province of British Columbia
Parliament Buildings
Victoria, British Columbia
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Dear Sir:

I have the honour to transmit herewith to the Legislative Assembly of British Columbia my 2005/2006 Report 1: Follow-up of the recommendations of the Select Standing Committee on Public Accounts contained in its Fourth Report of the 3rd Session of the 36th Parliament: Earthquake Preparedness; Performance Audit. The Committee's report included the recommendations made in my 1997/1998 Report 1: Earthquake Preparedness.

Wayne Strelioff, FCA
Auditor General

Victoria, British Columbia
May 2005

copy: Mr. E. George MacMinn, Q.C.
Clerk of the Legislative Assembly

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Auditor General's Comments

This report includes the results of our second follow-up review as at June 30, 2004 of the Select Standing Committee on Public Accounts' Fourth Report of the 3rd Session of the 36th Parliament: Earthquake Preparedness; Performance Audit. The Committee's report issued in July 1999 includes and endorses the recommendations made in our Office's *1997/1998 Report 1: Earthquake Preparedness*.

We perform follow-up reviews to provide the Legislative Assembly and the public with an update on the progress made by management in implementing our recommendations. These recommendations are designed to improve public sector performance, and are an important value-added component of my Office's work. In cases where significant recommendations have not been substantially implemented at the time of our initial follow-up, we carry out further follow-up work.

In May 1999, we carried out a follow-up review of our original earthquake preparedness report, and performed our first follow-up review of the Committee's report in as at March 31, 2002. Since there were still significant recommendations not implemented when we did the latter review, we have carried out a second follow-up of the Committee's report in the period from July to November, 2004.

We conducted our review by obtaining information from the Ministry of Public Safety and Solicitor General, which includes the Provincial Emergency Program, and the Ministries of Community, Aboriginal and Women's Services, Education, Energy and Mines, Finance, Health Services, and Water, Land and Parks.

Over recent years, legislators and my Office have maintained a keen interest in the state of emergency preparedness in British Columbia. In particular, the Committee has requested me to carry out on an annual basis follow-ups of the recommendations in the Committee's report on earthquake preparedness.

However, one of the trends that has developed during the time since my Office carried out its original work is a shift in the government's approach to emergency planning and management. In its responses included in this update, the Ministry of Public Safety and Solicitor General has noted that with regard to some of the recommendations in our 1997 report, it has taken action alternative to that we had proposed. It has pointed out that, since the time our report was prepared, the government has been moving away from a hazard-based approach to preparedness, response and recovery to a

pro-active, integrated, all-hazards approach. The government–wide adoption of the British Columbia Emergency Management Response System (BCERMS) in 2000 is a key example of how this shift has been taking place. As a result, the ministry considers that some of the actions we recommended cannot be implemented in their original form in the context of the current management framework.

I concur with the ministry's position that emergency management is continually evolving. Our understanding of the hazards and risks and how best to manage them expands all the time through research and analysis of world-wide events and our own practical experience gained in responding to significant emergencies, such as the fire storms in the Okanagan Valley in 2003 and the avian flu outbreak in the Lower Mainland in 2004. This understanding helps government ensure that its focus and priorities for emergency management at any one time adequately reflect the relative hazards and risks as we know them. And as this understanding of the hazards and their potential impacts continuously evolves, so does the emergency management system in order to plan an effective response to them.

These factors have led me to reflect further on how I can best serve the needs of legislators and the public for information about government performance in its ability to manage emergencies. I believe that I can achieve this by shifting my own focus to one of aligning future work of my Office to assessing how well government manages its emergency planning in the context of today's all-hazards strategies.

A catalyst that would help me achieve this is one of the recommendations that I made in my 1997 report and that was endorsed by the Committee. This recommendation called for the government to prepare an annual report on the state of earthquake preparedness that would provide legislators and the public with timely information about progress being made in becoming better prepared. The government has pointed out in this follow-up that, since it is now using an all-hazards approach to emergency planning, it is not practical to prepare an annual report just on earthquake preparedness—a position that I find reasonable. Given this, I strongly encourage the government to prepare an annual report on the state of all-hazards emergency preparedness in the province by reference to the risk management approach currently in use. I believe that this more timely and expansive information would best tell legislators and the public what they most want to know. And it would also allow me to provide them with meaningful assurance on such information.

106-00391/

A sound framework for reporting on the status of emergency preparedness would be that of the Performance Reporting Principles for the British Columbia Public Sector that were endorsed by the government, the Committee and my Office in November 2003. The eight principles set out the broad issues that good performance reports should address, and define many of the attributes that the information should possess. The eight principles are:

- Explain the public purpose served
- Link goals and results
- Focus on the few, critical aspects of performance
- Relate results to risk and capacity
- Link resources, capacity and results
- Provide comparative information
- Present credible information, fairly presented
- Disclose the basis for key reporting judgements

Over the past few years, my Office has carried out reviews of the progress of government organizations in implementing these principles, and we are in the early stages of carrying out audits of the credibility and fairness of presentation of the information included in some of the reports. I would therefore be able to perform at appropriate intervals similar work on performance reports of the government's achievements in improving emergency preparedness in the province. I believe that this work would be the best means of my meeting the information needs of the Legislative Assembly and the public for assurance on progress in improving emergency preparedness. And for this reason, I do not plan to carry out any further follow-ups based on the work carried out in 1997 by my Office on earthquake preparedness.

I would be pleased to discuss this issue with the Committee.

Wayne Strelioff

Wayne Strelioff, FCA
Auditor General

Victoria, British Columbia
May 2005

Report on the Status of Recommendations

We have reviewed the representations provided by the government of British Columbia regarding progress in implementing the recommendations contained in the Select Standing Committee on Public Accounts' Fourth Report of the 3rd Session of the 36th Parliament—Earthquake Preparedness; Performance Audit. The review was made in accordance with standards for assurance engagements established by the Canadian Institute of Chartered Accountants, and accordingly consisted primarily of enquiry, document review and discussion.

Information as to the status of outstanding recommendations as of June 30, 2004 was provided to us substantially by the Provincial Emergency Program of the Ministry of Public Safety and Solicitor General and, with respect to a smaller number of recommendations regarding their functions, by other government ministries with emergency management responsibilities.

Based on our review, nothing has come to our attention to cause us to believe that the progress report prepared by the government of British Columbia does not present fairly, in all significant respects, the progress made in implementing the recommendations contained in the Select Standing Committee's report.

Wayne Strelioff

Wayne Strelioff, FCA
Auditor General

November 2004

Summary of Original Report on The Ministry of Attorney General, Provincial Emergency Program: Earthquake Preparedness

Southwestern British Columbia lies over the active Cascadia subduction zone in an earthquake environment comparable to that existing along the coasts of Japan, Alaska, and Central and South America. There is considerable earthquake activity along the fault lines of three plates lying to the west of the North American continent. Records show that major damaging earthquakes have occurred over this zone in 8 of the last 100 years, and that a catastrophic earthquake is likely once every 300 to 800 years.

Given these risks, it is incumbent upon governments to take steps to prepare for a major earthquake. In British Columbia, local governments are the first responders, with the provincial government and, ultimately, the federal government providing assistance as required. However, it is the provincial government that has an overall leadership and coordination role in emergency management, and it has assigned responsibility for this role to the Provincial Emergency Program, an agency within the Ministry of Attorney General.

In December 1997, we reported the results of our audit which assessed the adequacy of the state of earthquake preparedness of British Columbia's provincial and local governments. We carried out the audit between February and November, 1997.

The audit report contained 60 recommendations. Nine were described as strategic recommendations—important issues which unless dealt with leave, in our opinion, little likelihood of significant improvement in the overall state of earthquake preparedness in British Columbia. Of the other recommendations—operational—38 were directed to provincial government agencies and 23 to local governments.

Audit Purpose and Scope

The purpose of the audit was twofold: to assess the degree to which governments in British Columbia are prepared for a major earthquake in high hazard areas of the Province; and to determine what actions, if any, are needed to raise the level of preparedness to an adequate standard.

Our audit focused on the critical elements of earthquake preparedness. These are:

- understanding the hazards, risks and vulnerabilities;
- mitigating the potential impacts of a major earthquake;
- planning for response to a major earthquake; and
- planning for recovery from a major earthquake.

Specifically, we were interested in examining how well all of these elements are being handled by the provincial government and local governments (although one important segment of the work examined the relationship between the provincial and federal governments in emergency planning). This included examining the governments' roles in mitigating the potential impacts of a major earthquake through, for example, the appropriate design and enforcement of building codes and the fostering of public awareness. We also studied the extent to which current, tested plans are in place to respond in the immediate aftermath of a major earthquake. As well, we looked at the capability of governments to carry on providing essential services to the public through proper continuation and recovery plans. Our examination focused on the plans and procedures in place during the period April to July 1997.

Finally, although it was not part of the audit, we also carried out a limited review of the "Blizzard of '96" to determine which features of the emergency management system did and did not work well, and to assess the implications of this for earthquake preparedness in the Province.

Overall Conclusion

We concluded that governments in British Columbia are not yet adequately prepared for a major earthquake. However, we were impressed by the amount of earthquake planning that has taken place in recent years. The federal government, agencies such as the Provincial Emergency Program, and emergency planning officials in many local government organizations had been working hard to further the preparedness of the Province for such an event.

The provincial government and local governments were, in a general sense, aware of the hazards, risks and vulnerabilities associated with a major earthquake. However, they would be likely to experience difficulty (albeit to varying degrees) in planning mitigation, response and recovery programs effectively because they had not yet developed specific, comprehensive scenarios for all high hazard, high risk areas of the Province. Through these scenarios, governments would be able to assess the likely impacts of a major earthquake on citizens, critical facilities, lifelines and economies—information that would better focus planning and public awareness programs.

Governments also had a general understanding of the importance of mitigation. However, it was unclear whether resources invested by provincial and municipal governments to upgrade infrastructure (such as bridges and dams) were being targeted to the highest priorities because a coordinated approach and a long-term strategy had not been developed. Furthermore, there was no assurance that all critical response facilities (such as fire and ambulance halls, and police stations) would remain operational after an earthquake, or that damage to hazardous buildings would not cause avoidable injury or death. Public apathy about preparing for an earthquake remained high, despite a number of public awareness programs having been implemented.

It would have been unlikely that all key aspects of the government response efforts for a major earthquake would have worked as intended. The Provincial Emergency Program, and most provincial government organizations and local governments, had developed response plans that deal with key response functions, and some testing of those plans had been carried out. However, the provincial response plan, while sound in concept, was still in interim form after five years, and needed updating and finalizing. Some provincial government response functions, such as emergency social services, appeared well prepared; others, such as the medical and heavy urban search and rescue functions, did not.

We believed that local governments were not yet adequately prepared to respond. The quality of local government earthquake planning varied widely. Some jurisdictions had taken the earthquake threat very seriously and were continuing to improve their response plans. Other jurisdictions had given less attention to developing sound plans. Nearly 20% of the local governments who answered our survey reported that there was no earthquake preparedness plan in their jurisdiction.

At all levels, testing of response plans was insufficient, and there were indications that more training was required. The ability of responders to communicate with each other and with different levels of government continued to be a concern, although steps were being taken to improve the situation.

Both the provincial and local governments were not prepared to manage the recovery that will be necessary after a major earthquake. Business continuation planning—critical to effective short-term recovery—was almost non-existent at the provincial level. It was also generally lacking at the local level, although some municipalities were currently developing such plans. Procedures for inspecting and posting unsafe buildings did not exist, and little thought had been given to how the debris resulting from a major earthquake would be dealt with. Also, few governments had plans for expediting the repairs and rebuilding that would be necessary, and none had analyzed the financial options for funding a rebuilding program.

Recommendations of the Select Standing Committee on Public Accounts

The report of the Select Standing Committee on Public Accounts includes recommendations in the following areas:

- Understanding the hazards, risks and vulnerabilities associated with earthquakes in British Columbia
- Strengthening the provincial government's leadership role in earthquake preparedness
- Mitigating the potential impacts of a major earthquake
- Defining the scope and long-term goals of British Columbia's earthquake preparedness program
- Planning for recovery from an earthquake

The Select Standing Committee on Public Accounts made additional recommendations resulting from its review. These have been included in our follow-up.

Summary of the Status of Recommendations at June 30, 2004

Original OAG report issued in December 1997

Report of the Public Accounts Committee issued in July 1999

Summary of Status at June 30, 2004	OAG	PAC	Total
Total Recommendations	**24**	**23**	**47**
Fully implemented	9	11	20
Substantially Implemented	9	2	11
Partially Implemented	3	7	10
Alternative Action	3	3	6

Recommendations that have only partially been implemented

What are the Hazards, Risks and Vulnerabilities Associated with Earthquakes in British Columbia

Earthquake Planning Scenarios and Infrastructure Inventories – Recommendation #3:

3.2 Your committee recommends that the provincial government work with local governments to ensure that microzonation mapping is completed in high-hazard areas of British Columbia as soon as possible.

How can we Mitigate the Potential Impacts of a Major Earthquake?

Insurance – Recommendation #8:

8.2 Your committee recommends that the provincial government, in consultation with the general insurance industry and other stakeholders, clarify the issues with respect to scope of insurance coverage for damages resulting from earthquakes, and in particular with respect to fire damage following earthquake.

8.3 Your committee recommends that the provincial government require insurers to take appropriate steps to draw to policy-holders' attention, on the face of insurance policies, the scope of coverage available with respect to damages resulting from earthquake.

9.2 Your committee recognizes the work of Treasury Board (Capital Division) in evaluating, costing and prioritizing seismic upgrading of British Columbia's infrastructure.

Your committee encourages the provincial government to make the seismic upgrading of provincial infrastructure a priority in British Columbia and, in doing so, to recognize its moral and legal responsibility for the safety of the province's school children.

9.3 Your committee recommends that seismic upgrading projects in schools include a consideration of non-structural damage mitigation measures, such as seismic restraint systems.

How do we Plan for Response to a Major Earthquake

Earthquake Response in Supporting Ministries and Schools – Recommendation #12:

12.3 Your committee notes the steps taken by the Ministry of Health to review and strengthen the ability of the health system to respond to a major earthquake, and encourages the ministry to continue its efforts in this regard, and in particular to consider the adequacy of British Columbia's ambulance services' capacity.

12.4 Your committee recommends that the provincial government encourage local government initiatives, as well as cooperation between industry and governments, with respect to hazardous materials planning.

Planning for Recovery from an Earthquake

Post-Earthquake Damage Assessment, Debris Removal and Reconstruction – Recommendation #17:

17.2 Your committee endorses the Auditor General's recommendation that the PEP pursue the recommendations contained in the Joint Emergency Liaison Committee's interim report with respect to post-earthquake structural assessment, and encourages the PEP to take steps to implement this recommendation.

17.3 Your committee endorses the recommendations made by the Auditor General to the PEP with respect to advising local governments on post-earthquake building inspection, debris removal and reconstruction, and encourages the PEP to implement these recommendations.

Business Continuation Planning – Recommendation #18:

18.2 Your committee endorses the recommendations made by the Auditor General to the provincial government, the PEP and local governments concerning business continuation planning, encourages implementation of those recommendations, and recommends that the PEP work cooperatively with local governments to develop guidelines for local government business continuation plans.

Recommendations for which alternative action has been taken

What are the Hazards, Risks and Vulnerabilities Associated with Earthquakes in British Columbia

Seismic Safety Committee – Recommendation #2:

2.1 Your committee endorses the Auditor General's recommendation regarding establishment of a Seismic Safety Committee in British Columbia to advise the government with respect to earthquake hazards, mitigation, response and recovery planning, and encourages the provincial government to take steps to establish such a committee.

Strengthening the Provincial Government's Leadership Role in Earthquake Preparedness

Scope and Long-term Goals of British Columbia's Earthquake Preparedness Program – Recommendation #4:

4.2 Your committee recommends that the Provincial Emergency Program finalize its B.C. Earthquake Strategy, which is currently still in outline form.

The Provincial Emergency Program – Recommendation #5:

5.2/3 Your committee acknowledges the PEP's efforts to provide an annual report to the Deputy Ministers Emergency Preparedness Committee, and endorses the Auditor General's recommendation that the PEP be required to report annually on the state of earthquake preparedness. Your committee recommends that the annual report by the PEP include, but not be limited to, a discussion of the following topics:

- The progress of earthquake planning and preparedness in provincial ministries and Crown corporations;
- Federal-provincial coordination of earthquake planning and preparedness measures;
- The work and progress of Treasury Board (Capital Division) with respect to seismic upgrading of provincial infrastructure.

How can we Mitigate the Potential Impacts of a Major Earthquake?

Improving the Seismic Capability of British Columbia's Infrastructure – Recommendation #9:

9.4 Your committee recommends that the provincial government ensure that all buildings that are designated as emergency centres meet current seismic standards.

How Do We Plan for Response to a Major Earthquake

Interjurisdictional Coordination of Preparedness and Response Planning – Recommendation #15:

15.4 Your committee recommends that future testing of earthquake response plans involve participation by urban search and rescue teams.

Planning for Recovery from an Earthquake

Post-Earthquake Damage Assessment, Debris Removal and Reconstruction – Recommendation #17:

17.4 Your committee endorses the Auditor General's recommendations to local goverment with respect to planning for post-earthquake damage assessment, infrastructure inspection, debris removal and reconstruction, and encourages local government to implement these recommendations.

Response from the Ministries of Public Safety and Solicitor General, Community, Aboriginal and Women's Services, Education, Energy and Mines, Finance, Health Services and Water, Land and Parks

Summary of Status of Implementation by Recommendation at June 30, 2004

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
WHAT ARE THE HAZARDS, RISKS & VULNERABILITIES ASSOCIATED WITH EARTHQUAKES IN BRITISH COLUMBIA **Public Awareness – Recommendation #1:** 1.1 Your committee endorses the Auditor General's recommendations that PEP measure the extent of public preparedness and develop a coordinated public awareness communication strategy.		✓			
1.2 Your committee recommends that PEP, in developing a coordinated public awareness communication strategy, take advantage of marketing expertise and work closely with local governments, neighbourhood programs and non-profit agencies.		✓			
1.3 Your committee recommends that the provincial government encourage the incorporation of earthquake preparedness issues and emergency first aid certificate programs into school curricula throughout British Columbia.	✓				
Seismic Safety Committee – Recommendation #2: 2.1 Your committee endorses the Auditor General's recommendation regarding establishment of a Seismic Safety Committee in British Columbia to advise the government with respect to earthquake hazards, mitigation, response and recovery planning, and encourages the provincial government to take steps to establish such a committee.				✓	

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
Earthquake Planning Scenarios and Infrastructure Inventories – Recommendation 3 3.1 Your committee endorses the recommendations made by the Auditor General with respect to the development of earthquake planning scenarios and inventories of key infrastructure. Your committee notes the preliminary steps taken by PEP and local governments in this regard, and encourages them to ensure that these recommendations are implemented.		✓ (PEP)	✓ (Energy, Mines)		
3.2 Your committee recommends that the provincial government work with local governments to ensure that microzonation mapping is completed in high-hazard areas of British Columbia as soon as possible.			✓		
STRENGTHENING THE PROVINCIAL GOVERNMENT'S LEADERSHIP ROLE IN EARTHQUAKE PREPAREDNESS **Scope and Long-term Goals of British Columbia's Earthquake Preparedness Program – Recommendation 4** 4.1 Your committee endorses the Auditor General's recommendations that the provincial government set long-term goals and provide more focus to its earthquake preparedness program, and encourages the provincial government to continue its efforts in this regard.	✓				
4.2 Your committee recommends that the Provincial Emergency Program finalize its B.C. Earthquake Strategy, which is currently still in outline form.				✓	
The Provincial Emergency Program – Recommendation 5 5.1 Your committee endorses the recommendation of the Auditor General regarding repositioning and increasing funding for the Provincial Emergency Program, and encourages the provincial government to consider repositioning PEP within the Premier's Office in order to raise its profile and increase its effectiveness.	✓				

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
5.2/3 Your committee acknowledges PEP's efforts to provide an annual report to the Deputy Ministers' Emergency Preparedness Committee, and endorses the Auditor General's recommendation that PEP be required to report annually on the state of earthquake preparedness. Your committee recommends that the annual report by PEP include, but not be limited to, a discussion of the following topics: ■ The progress of earthquake planning and preparedness in provincial ministries and Crown corporations; ■ Federal-provincial coordination of earthquake planning and preparedness measures; ■ The work and progress of Treasury Board (Capital Division) with respect to seismic upgrading of provincial infrastructure.				✓	
The Inter-Agency Emergency Preparedness Council – Recommendation 6 6.1 Your committee endorses the Auditor General's recommendation that the profile of the Inter-Agency Emergency Preparedness Council be raised, acknowledges development by the IEPC of a "Strategic Activities Plan" to address this recommendation, and encourages the provincial government to continue to take steps to ensure that the Auditor General's recommendation is implemented.	✓				
6.2 Your committee recommends that the IEPC work with non-government emergency response organizations to achieve better coordination of response efforts.	✓				
Encouraging Regional Emergency Planning and Coordination – Recommendation 7 7.1 Your committee endorses the recommendation of the Auditor General regarding strengthening regional emergency planning and coordination, and encourages PEP to continue its efforts in this regard.		✓			

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
HOW CAN WE MITIGATE THE POTENTIAL IMPACTS OF A MAJOR EARTHQUAKE **Insurance – Recommendation 8** 8.1 Your committee recommends that the provincial government, in consultation with the general insurance industry and other stakeholders, determine the type of regime that would best ensure affordable earthquake insurance continues to be available to compensate British Columbia policyholders who suffer earthquake-related loss to their property and/or its contents, and encourage the adoption by those policyholders.	✓ (Finance)			✓ (PEP)	
8.2 Your committee recommends that the provincial government, in consultation with the general insurance industry and other stakeholders, clarify the issues with respect to scope of insurance coverage for damages resulting from earthquakes, and in particular with respect to fire damage following earthquake.			✓		
8.3 Your committee recommends that the provincial government require insurers to take appropriate steps to draw to policyholders' attention, on the face of insurance policies, the scope of coverage available with respect to damages resulting from earthquake.			✓		
Improving the Seismic Capability of British Columbia's Infrastructure – Recommendation 9 9.1 Your committee endorses the Auditor General's recommendations concerning the application of the seismic elements of the provincial building code, the provincial government's role in advising municipalities regarding the code, the identification of hazardous buildings and the upgrading of critical response facilities. Your committee encourages the provincial government and local governments to ensure that these recommendations are implemented as soon as possible.		✓ (CAWS)		✓ (PEP)	

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
9.2 Your committee recognizes the work of Treasury Board (Capital Division) in evaluating, costing and prioritizing seismic upgrading of British Columbia's infra-structure. Your committee encourages the provincial government to make the seismic upgrading of provincial infrastructure a priority in British Columbia and, in doing so, to recognize its moral and legal responsibility for the safety of the province's school children.			✓ (Education)	✓ (Finance)	
9.3 Your committee recommends that seismic upgrading projects in schools include a consideration of non-structural damage mitigation measures, such as seismic restraint systems.			✓		
9.4 Your committee recommends that the provincial government ensure that all buildings that are designated as emergency centres meet current seismic standards.				✓	
Natural Gas Hazards – Recommendation 10 10.1 Your committee recommends that the provincial government encourage and promote tie-down programs for gas appliances and mobile homes, and examine the feasibility of mandating tie-downs in the applicable codes.	✓				
10.2 Your committee recommends that the provincial government encourage and promote public education with respect to earthquake-related natural gas hazards.	✓				
HOW DO WE PLAN FOR RESPONSE TO A MAJOR EARTHQUAKE **British Columbia Earthquake Response Plan – Recommendation 11** 11.1 Your committee endorses the recommendations of the Auditor General regarding updating of the British Columbia Earthquake Plan and related regulations, development of a new communication strategy with respect to the plan, and the identification of potential sites for Provincial Field Response Centres and an alternative location for the Provincial Emergency Coordination Centre. Your committee encourages PEP to implement these recommendations.	✓				

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
Earthquake Response in Supporting Ministries and Schools – Recommendation 12 12.1 Your committee endorses the Auditor General's recommendations concerning earthquake response planning in ministries with key support functions and the development of systems standards for resource management, and encourages the provincial government to ensure that steps are taken to implement these recommendations.		✓			
12.2 Your committee recommends that the provincial government encourage earthquake response planning and testing in all British Columbia schools, and to consider providing funding assistance for emergency supplies in all schools.	✓				
12.3 Your committee notes the steps taken by the Ministry of Health to review and strengthen the ability of the health system to respond to a major earthquake and encourages the ministry to continue its efforts in this regard, and in particular to consider the adequacy of British Columbia's ambulance services capacity.			✓		
12.4 Your committee recommends that the provincial government encourage local government initiatives, as well as cooperation between industry and governments, with respect to hazardous materials planning.	✓ (PEP)		✓ (WLAP)		
12.5 Your committee recommends that provincial and local governments take steps to ensure adequate consideration is given to women's services in earthquake response planning.	✓				
Neighbourhood Programs – Recommendation 13 13.1 Your committee recommends that the provincial government recognize the important role neighbourhood programs have to play in earthquake preparedness planning and response, and take steps to promote the development of more such programs in British Columbia.	✓				

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
Emergency Communications and Public Information – Recommendation 14 14.1 Your committee endorses the recommendations of the Auditor General to the PEP and local governments with respect to updating communications equipment, emergency public information plans and communications plans, and acknowledges the PEP's efforts to upgrade equipment and update its communications and public information plans.	✓				
14.2 Your committee encourages the PEP to complete its upgrading and updating efforts as soon as possible, and to ensure that these plans are updated on a regular basis. Your committee also encourages local governments to implement the Auditor General's recommendations with respect to emergency communications and public information plans.		✓			
Interjurisdictional Coordination of Preparedness and Response Planning – Recommendation 15 15.1 Your committee endorses the recommendations of the Auditor General to the PEP and local governments concerning cooperative efforts between the PEP, local governments, other provincial governments, the federal government and the Canadian Forces with respect to earthquake preparedness and response support plans, and encourages the PEP and local governments to implement these recommendations.		✓			
15.2 Your committee acknowledges the Provincial Emergency Program's efforts in coordinating the "Thunderbird 4 – Cascadia Response" exercise in March 1999, and recommends that the provincial government encourage more joint earthquake response exercises by the Provincial Emergency Program, Emergency Preparedness Canada and the Canadian Forces, including regular exercises around the National Earthquake Support Plan and its relationship to British Columbia's plans.		✓			

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
15.3 Your committee endorses the Auditor General's recommendations to local governments and the PEP with respect to local government planning and testing, and encourages implementation of these recommendations.	✓				
15.4 Your committee recommends that future testing of earthquake response plans involve participation by urban search and rescue teams.				✓	
Emergency Planning and Response Training – Recommendation 16 16.1 Your committee endorses the Auditor General's recommendations to the PEP with respect to training for emergency planning and response positions at the provincial and local government levels, acknowledges the efforts undertaken by the Provincial Emergency Program to develop and offer emergency management training through the Justice Institute, and encourages the PEP to ensure that the Auditor General's recommendations with respect to training be implemented.	✓				
16.2 Your committee recommends that the provincial government review relevant legislation and policies to ensure that there are no legislative, regulatory or other impediments to the provision of adequate emergency training and certification to enable emergency medical assistants to provide effective assistance in the event of a major earthquake.	✓				
PLANNING FOR RECOVERY FROM AN EARTHQUAKE **Post-Earthquake Damage Assessment, Debris Removal and Reconstruction – Recommendation 17** 17.1 Your committee endorses the recommendations of the Auditor General to the PEP concerning development of a damage assessment plan, and communication thereof, and encourages the PEP to implement this recommendation.		✓			

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
17.2 Your committee endorses the Auditor General's recommendation that the PEP pursue recommendations contained in the Joint Emergency Liaison Committee's (JELC) interim report with respect to post-earthquake structural assessment, and encourages the PEP to take steps to implement this recommendation.			✓		
17.3 Your committee endorses the recommendations made by the Auditor General to the PEP with respect to advising local governments on post-earthquake building inspection, debris removal and reconstruction, and encourages the PEP to implement these recommendations.			✓		
17.4 Your committee endorses the Auditor General's recommendations to local governments with respect to planning for post-earthquake damage assessment, infrastructure inspection, debris removal and reconstruction, and encourages local governments to implement these recommendations.				✓	
Business Continuation Planning – Recommendation 18 18.1 Your committee acknowledges the work done by the Risk Management Branch of the Ministry of Finance and Corporate Relations with respect to business continuation planning and coordination with the PEP, endorses the Auditor General's recommendations to the provincial government in this regard, and encourages the provincial government to ensure that the Auditor General's recommendations are fully implemented.		✓			
18.2 Your committee endorses the recommendations made by the Auditor General to the provincial government, the PEP and local governments concerning business continuation planning, encourages implementation of those recommendations, and recommends that the PEP work cooperatively with local governments to develop guidelines for local government business continuation plans.			✓		

Public Accounts Committee Recommendations	Implementation Status				
	Fully	Substantially	Partially	Alternative Action	No Action
Funding Earthquake Recovery Costs – Recommendation 19 19.1 Your committee endorses the Auditor General's recommendation to the provincial government with respect to preparing for and mitigating its financial liabilities following a major earthquake, and encourages the provincial government to ensure that this recommendation is implemented.	✓				
19.2 Your committee recommends that the provincial government educate British Columbians about the fact that public funds will generally not be available to compensate for losses to private property resulting from earthquake, and that public funds will only be available to restore and replace public infrastructure.	✓				
Developing Implementation Strategies and Reporting Back on Progress – Recommendation 20 20.1 Your committee recommends that the provincial government, in particular the Provincial Emergency Program, move with dispatch in developing strategies to address the recommendations contained in this report.	✓				
20.2 Your committee recommends that representatives of the Provincial Emergency Program re-attend before the committee no later than December 31, 1999, in order to provide information regarding progress made in implementing the recommendations contained in this report.	✓				

Detailed Status of Implementation by Recommendation at June 30, 2004

In the section that follows, progress assessments are from the Provincial Emergency Program of the Ministry of Public Safety and Solicitor General, unless otherwise stated.

What are the Hazards, Risks & Vulnerabilities Associated with Earthquakes in British Columbia

Public Awareness – Recommendation #1:

1.1 Your committee endorses the Auditor General's recommendations that the PEP measure the extent of public preparedness and develop a coordinated public awareness communication strategy.

Implementation Status: *Substantially Implemented*

Comments:

- A web-based Community Emergency Preparedness Review (CEPR), supported by the Hazard Risk and Vulnerability Analysis (HRVA) toolkit now enables communities to assess and record their level of preparedness.
- A new provincial "Crisis Communications Strategy for Major Provincial Emergencies" has been developed, trained to, and implemented by Public Affairs Bureau (PAB). The new strategy was used very successfully in fire season 2004.
- PEP continues to provide earthquake awareness and education within the context of on-going "all-hazard" information releases, presentations, and workshops. There is also extensive earthquake information on the PEP website at "www.pep.bc.ca." This website is of international level calibre, and also provides linkages to other emergency management related websites from around the world.
- A full-time Education Officer has been employed at PEP since April 2003, and continues to provide significant capability in this regards.

1.2 Your committee recommends that the PEP, in developing a coordinated public awareness communication strategy, take advantage of marketing expertise and work closely with local governments, neighbourhood programs and non-profit agencies.

Implementation Status: *Substantially Implemented*

Comments:

- PEP needs to continue to work with other stakeholders to maintain a coordinated public awareness strategy.
- PEP continues to work in partnership with other stakeholders to promote public awareness and public education. Examples include:
  - **School Curriculum** – Development of grades K-6 and 7-12 earthquake awareness curriculum was completed with **Ministry of Education.**
  - **Earthquake Planning for Business** – Revision of a preparedness guide targeted to businesses was completed in 2003. Workshops using this guide were held in the Lower Mainland to assist businesses in determining their Earthquake Preparedness Levels. Partnered with the **Emergency Preparedness for Industry and Commerce Council** and the **Institute of Catastrophic Loss Reduction.**
  - **Cascadia: The Hidden Fire Documentary** – A one-hour documentary video was completed in the spring of 2004 and has aired several times on PBS in BC, Washington and Oregon. Partnered with **Cascadia Region Earthquake Working group (CREW)** and **Global Net Productions.**
  - **Tsunami Cartoon** – A tsunami awareness cartoon was completed in the spring of 2004. Product development was a joint partnership with **Washington State**.
  - **Earthquake Probabilities Paper** – A scientific assessment detailing the probability of damaging earthquake occurrence in 10 BC communities was completed the summer of 2004. Results were presented to provincial and local government emergency coordinators. This was a partnership initiative with **Natural Resources Canada.**

- PEP continues to work closely with a cross-section of local, regional, provincial, federal and international entities to ensure the provincial seismic hazard awareness messages reach the public in a cost-effective manner.
- PEP continues to work with the Joint Emergency Liaison Committee (JELC) to develop an integrated public information strategy with local and regional governments.
- The PEP website is an integrated website, that promotes all hazard preparedness, planning, response and recovery at all levels. The website is recognized internationally for the comprehensive information it lists. This information applies to earthquakes as one of 57 hazards.
- In the last two years PEP has increased its focus on reaching elected and senior officials at local government, as they were deemed to be an essential stakeholder where messaging needed to be enhanced. Hundreds of local government elected and senior officials have since attended half day and day long emergency management workshops held province-wide. Successful initiatives such as these workshops and courses will continue in the future.
- PEP continues to enjoy a close working relationship with non-government organizations, including the development and implementation of public awareness initiatives.

1.3 Your committee recommends that the provincial government encourage the incorporation of earthquake preparedness issues and emergency first aid certificate programs into school curricula throughout British Columbia.

Implementation Status

(Ministry of Education): Fully Implemented

Comments (Ministry of Education):

- Earthquake safety is included as part of the provincial curriculum in Personal Planning K to 7 and Career and Personal Planning 8 to 12. It is included as part of the curriculum organizer called "Safety and Injury Protection."
- Safety and Injury Prevention addresses a broad range of issues related to the personal safety of students. Specific reference is made to Earthquakes in Grade 4 and First Aid and Earthquakes in Grade 9.
- WCB – Occupational First Aid Level II and Level III are recognized for credit toward graduation as external courses.

- The ministry provided consultation and advice to the Provincial Emergency Program in the development of learning resources "Earthquakes Happen.....are you ready" that can be used by classroom teachers specific to earthquakes.

Seismic Safety Commission – Recommendation #2:

2.1 Your committee endorses the Auditor General's recommendation regarding establishment of a Seismic Safety Committee in British Columbia, to advise the government with respect to earthquake hazards, mitigation, response and recovery planning, and encourages the provincial government to take steps to establish such a committee.

Implementation Status: *Alternative Action*

Comments

- PEP continues to investigate options to establish a Provincial Seismic Safety Steering Committee.
- Some objectives identified for a Seismic Safety Committee have been achieved by engaging in task-oriented, results-based partnerships with private and public sector entities. Examples include:
  - Earthquake and Tsunami preparedness and response planning work with federal government agencies (PSEPC; NRCan; PWGSC; DFO; and DND)
  - Earthquake, tsunami, and volcano preparedness and response planning with neighbouring provinces and states (e.g. Alberta Earthquake Response Plan, Mt. Baker Response Plan)
  - Earthquake and tsunami awareness initiatives with GlobalNet Productions.

Since the original report was written, BC has moved to an all-hazards model, which in recent years has proved extremely effective and efficient, both for preparedness, planning, response and recovery. The Inter-Agency Emergency Preparedness Committee (IEPC), Central Coordination Group (CCG) and Deputy Minister's Working Group generally operate in an all-hazards perspective. If it was determined that a committee should be formed to deal with specific issues not covered by the all-hazards model currently in use, it may be an option to have a sub-committee of the IEPC formed to look at specific issues.

Earthquake Planning Scenarios and Infrastructure Inventories – Recommendation #3:

3.1 Your committee endorses the recommendations made by the Auditor General with respect to the development of earthquake planning scenarios and inventories of key infrastructure. Your committee notes the preliminary steps taken by the PEP and local governments in this regard, and encourages them to ensure that these recommendations are implemented.

Implementation Status: *Substantially Implemented*

Earthquake Planning Scenarios

Comments

- PEP continues to focus on and work to facilitate the development of empirically-based Earthquake, Tsunami, and Volcano Scenarios in partnership with other government and non-government agencies, including the academic community.
- PEP continues to play a leadership role in linking the various experts and those in the emergency management together and ensuring information and lessons learned are shared, and then disseminated broadly as required.
- In regards to earthquake planning scenarios it appears the frequency of these scenarios is adequate, and that at the time the scenarios are built the most up-to-date information is injected into the scenarios.

Inventories of Key Infrastructure

Comments

- The conduct of a survey to determine the seismic retrofit requirements of government is beyond the scope of PEP. PEP will however continue to encourage other ministries and agencies to act in this regard.
- PEP has recently acquired and filled a full-time Critical Infrastructure Planning position. PEP will continue to work with and facilitate key stakeholders to inventory and assess their respective critical infrastructure. PEP continues to work closely with the Federal Government (through Public Safety and Emergency Preparedness Canada (PSEPC).

Implementation Status: *(Ministry of Energy and Mines): Partially Implemented*

Comments: (Ministry of Energy Mines):

- The Ministry of Energy and Mines (MEM) has provided completed earthquake hazard maps for the Upper Fraser Valley Regional District and the Capital Regional District to emergency planners.
- The Department of Civil Engineering at UBC, with insurance industry funding, completed a building inventory for the City of Victoria and is using the MEM Hazard maps to develop building damage scenarios.
- Other than the UBC project, which is being done at a research level with graduate student theses, there is no systematic program to inventory key infrastructure in the province.

3.2 Your committee recommends that the provincial government work with local governments to ensure that microzonation mapping is completed in high-hazard areas of British Columbia as soon as possible.

Implementation Status: *(Ministry of Energy and Mines): Partially Implemented*

Comments (Ministry of Energy Mines):

- In May of 2000, MEM released microzonation maps for the CRD including liquefaction, landslide, amplification and generalized (composite) earthquake hazard maps. MEM resources are inadequate to meet the on-going demand for paper copies of the maps.
- MEM has completed seismic hazard assessments in Richmond including detailed seismic stability analyses of the dykes entirely using external funding from the City of Richmond and a JEPP grant. MEM is only providing technical expertise to manage the project.
- MEM is not currently planning any new microzonation mapping due to competing priorities and lack of MEM resources to deliver the project.
- Microzonation mapping is not included in the MEM business plan. To be able to deliver an effective microzonation mapping program, the Ministry would require a budget and FTE lift of $250,000 per year and 1 FTE for the next 8-10 years. This fact was also pointed out in previous reports.

Strengthening the Provincial Government's Leadership Role in Earthquake Preparedness

Scope and Long-term Goals of British Columbia's Earthquake Preparedness Program – Recommendation #4:

4.1 Your committee endorses the Auditor General's recommendations that the provincial government set long-term goals and provide more focus to its earthquake preparedness program, and encourages the provincial government to continue its efforts in this regard.

Implementation Status: *Fully Implemented*

Comments

- PEP has developed a Program Service Delivery Plan which continues to improve the overall level of preparedness in BC.

4.2 Your committee recommends that the Provincial Emergency Program finalize its B.C. Earthquake Strategy, which is currently still in outline form.

Implementation Status: *Alternative Implementation*

Comments

- PEP does not agree that a BC earthquake strategy needs to be developed as a stand alone plan. Seismic hazard service delivery initiatives (strategic issues) are included in the PEP multi-year Service Delivery Plan.
- PEP has developed all-hazard response plans supported by specific hazard contingency plans such as pandemic flu, flood, interface fire, etc.
- PEP also an earthquake response plan (1999) which is currently being revised in order to be consistent with the present BC emergency management concept of operations.
- All PEP plans and strategic documents are available from the PEP Website.

The Provincial Emergency Program– Recommendation #5:

5.1 Your committee endorses the recommendation of the Auditor General regarding repositioning and increasing funding for the Provincial Emergency Program, and encourages the provincial government to consider repositioning the PEP within the Premier's Office in order to raise its profile and increase its effectiveness.

Implementation Status: *Fully Implemented*

Comments

- The government has reviewed PEP's position and believes it correctly positioned with the Ministry of Public Safety and Solicitor General. PEP receives exceptional support from the Ministry of Public Safety and Solicitor General (PSSG) and the Premier's Office in meeting its objectives.
- Following the tabling of the Filmon Review in February 2004, PEP has received additional funding to establish the following emergency management positions:
  - 3 Senior Regional Manager positions
  - 2 Planning positions
  - 2 Integrated Recovery positions
  - 1 Manager of Emergency Training Programs
- These positions will further increase PEP's ability to provide provincial level leadership in planning and preparing for, responding to, and recovering from emergencies and disasters, including earthquakes.
- PEP is also working with its Federal partners and First Nations in establishing regionally based First Nation's emergency coordinators. These positions are an essential initiative in enhancing the BC Emergency Management Structure to support First Nations' emergency management in B.C.

5.2/3 Your committee acknowledges the PEP's efforts to provide an annual report to the Deputy Ministers Emergency Preparedness Committee, and endorses the Auditor General's recommendation that the PEP be required to report annually on the state of earthquake preparedness. Your committee recommends that the annual report by the PEP include, but not be limited to, a discussion of the following topics:

- **The progress of earthquake planning and preparedness in provincial ministries and Crown corporations;**
- **Federal-provincial coordination of earthquake planning and preparedness measures;**
- **The work and progress of Treasury Board (Capital Division) with respect to seismic upgrading of provincial infrastructure.**

Implementation Status: *Alternative Action*

Comments:

- The Deputy Ministers' Working Group continues to meet to actively address and provide executive level emergency management leadership and direction on issues such as interface fires, flooding, and avian influenza, as well as preparedness issues (ie potential drought, rates of pay etc).
- The province deals in an all-hazards perspective, using the BC Emergency Management Structure and the integrated response structure as the base for preparedness, planning, response and recovery to all-hazards.
- Although there are some specific activities in regards to earthquake planning in this update, generally the province uses an all-hazards approach. This broad-based approach (i.e. evacuation planning, building an Emergency Operations Centre (EOC) at local government level, conducting a community based Hazard Risk and Vulnerability Analysis (HRVA) has been very successful, and significantly moved emergency management forward in the province in recent years.
- In regards to earthquake planning and preparedness in Provincial Ministries and Crown corporations, an all hazards approach is also taken by Risk Management Branch (RMB) using similar fundamentals.
- (Auditor General's comment: As described in the response to recommendation 9.2, the Seismic Mitigation Program provided through the Capital Division of the Ministry of Finance ended at March 31, 2003. Current and future seismic funding is provided through the operating budgets of each agency).

The Inter-Agency Emergency Preparedness Council – Recommendation #6:

6.1 Your committee endorses the Auditor General's recommendation that the profile of the Inter-Agency Emergency Preparedness Council be raised, acknowledges development by the IEPC of a "Strategic Activities Plan" to address this recommendation, and encourages the provincial government to continue to take steps to ensure that the Auditor General's recommendation is implemented.

Implementation Status: *Fully Implemented*

Comments:

- The Inter-Emergency Preparedness Committee (IEPC) continues to meet and share information respecting emergency preparedness within government.
- The IEPC subcommittee on BC Emergency Response Management System (BCERMS) standards has established a certification process for persons delivering BCERMS (ICS) training and are currently engaged in revision of the BCERMS Overview, Provincial Regional Emergency Operations Centre (PREOC) and Emergency Operations Centre (EOC) Guidelines.
- The use of BCERMS in significant events in the past 18 months including fire season 2003 and 2004, fall flooding 2003 and avian influenza 2004 has been deemed a critical success factor for the thousands of personnel involved in planning, response and recovery to events. The BCERMS Committee, a sub-committee of the IEPC, should take credit for developing with stakeholders, and showing leadership in the implementation of, such a comprehensive and successful system. The IEPC needs to build on this type of leadership success.

6.2 Your committee recommends that the IEPC work with non-government emergency response organizations to achieve better coordination of response efforts.

Implementation Status: *Fully Implemented*

Comments:

- PEP and other IEPC members continue to enjoy a close working relationship with non-government emergency response organizations. The strength of these relationships has proven themselves in recent events.

- Non-government emergency response organizations continue to be an essential component of provincial level planning, preparation, response and recovery.

Encouraging Regional Emergency Planning and Coordination – Recommendation #7:

7.1 Your committee endorses the recommendation of the Auditor General regarding strengthening regional emergency planning and coordination, and encourages the PEP to continue its efforts in this regard.

Implementation Status: *Substantially Implemented*

Comments:

- Legislative changes to the Emergency Program Act in May of 2004 now require by law Regional District involvement in Emergency Planning.
- Grants are being provided by UBCM over the next three years ($2.5 million dollars over three years) to local and regional district governments to assist in local and regional government emergency planning. The Justice Institute also received a one time grant of $300,000 to provide emergency management training primarily focused at regional districts.
- PEP has developed and presented to local and regional governments Elected Officials and Senior Emergency Officials Workshops on emergency management in BC.
- PEP continues to encourage and work with all levels of government to assess community hazards, risks, and vulnerabilities, including provision of a free to use web-based Hazard Risk and Vulnerability Analysis toolkit. PEP regional and HQ staff are also available to meet and assist local and regional governments with the use of the toolkit, and answer any emergency management questions that may arise.
- PEP is also working with its Federal partners and First Nations in establishing regionally based First Nation's emergency managers. These positions are an essential initiative in enhancing the BC Emergency Management Structure to support First Nations' emergency management in B.C.
- As noted in Section 5.1, following the tabling of the Filmon Review in February 2004, PEP has received additional funding to establish 3 Senior Regional Managers, 2 Planning positions, a Manager of Emergency Training Programs, and 2 Integrated Recovery positions. These staff will further enhance PEP's ability to support local and regional district emergency management planning.

- PEP continues to actively encourage regional emergency planning through such organizations as the Joint Emergency Liaison Committee (JELC), its numerous emergency planning subcommittees, and the Regional Emergency Planning Committee (REPC) in the lower mainland; the Regional Emergency Coordination Committee (RECC) in greater Victoria and the Mid-Island Emergency Managers Committee in central Vancouver Island.

How Can We Mitigate the Potential Impacts of a Major Earthquake?

Insurance – Recommendation #8:

8.1 Your committee recommends that the provincial government, in consultation with the general insurance industry and other stakeholders, determine the type of regime that would best ensure affordable earthquake insurance continues to be available to compensate British Columbian policyholders who suffer earthquake-related loss to their property and/or its contents, and encourage the adoption by those policyholders of cost-effective risk mitigation measures.

Implementation Status: *Cost-effective Mitigation – Alternative Action*

Comments:

- Mitigation best practices in other jurisdictions continue to be identified and assessed for their applicability to British Columbians.
- PEP continues to work with the insurance industry to encourage the establishment of incentives to both take up earthquake insurance and foster mitigative practices.
- PEP is actively working with the federal government and other provinces/territories in the development of a National Disaster Mitigation Strategy which will include earthquake mitigation.
- PEP continues to work with other stakeholders to ensure that information is disseminated to all levels of government and the public (see more comprehensive comments, see Recommendation 1.2).

Implementation Status: *Insurance availability (Ministry of Finance) – Fully Implemented*

Comments: (Ministry of Finance):

- Following completion of a household survey on insurance take-up and public attitudes and further consultation with the insurance industry, the Ministry of Finance is of the view that the current market provides sufficiently affordable and available earthquake insurance for British Columbians – particularly in the high risk areas of the Lower Mainland and Vancouver Island. It would be difficult to justify public sector insurance, as they have, for example, in New

Zealand. British Columbia compares very favourably to other jurisdictions in terms of the number of homeowners insured and earthquake insurance costs, as noted in a recent paper:

> "By international standards, the demand for earthquake insurance is strong in Vancouver and Victoria....A study last fall by the British Columbia government found that 96% of homeowners have fire insurance and 63% purchase earthquake cover. The Insurance Bureau of Canada estimates that 80% of business in the area purchase insurance coverage that includes earthquake insurance. Nearby Seattle residents are vulnerable to similar seismic risks but only 12% of homeowners purchase earthquake insurance."(P. Kovacs and H. Kunreuther, "Managing Catastrophic Risk: Lessons from Canada, paper presented to the ICLR/ICB Earthquake Conference, March 23, 2001, Simon Fraser University, page 20).

8.2 Your committee recommends that the provincial government, in consultation with the general insurance industry and other stakeholders, clarify the issues with respect to scope of insurance coverage for damages resulting from earthquakes, and in particular with respect to fire damage following earthquake.

Implementation Status: *(Ministry of Finance): Partially Implemented, ongoing*

Comments: (Ministry of Finance):

- The Ministry of Finance's last follow-up comment on this was made on August 31, 2001. In this response, the ministry indicated that the government intended to consult with stakeholders on a proposal made by the Insurance Bureau of Canada (IBC). The IBC proposed that the Insurance Act be amended to allow insurers to exclude fire following an earthquake from the basic home and commercial business property insurance policy and package all earthquake risk in a single policy. The proposed consultations were overtaken by two key events.

  First, less than two weeks after, the insurance market for catastrophic risk was fundamentally altered by the terrorist act in the United States. The focus shifted from earthquake to terrorism risk. There was a concern that reinsurance would not be available for catastrophic risks (including earthquake and terrorism) in Canada. The government understands that, during recent negotiations for 2004 coverage, reinsurers sought to exclude risk for fire following terrorist acts (and for fire following nuclear incident, but not earthquakes); however, insurance companies resisted and negotiated continued coverage for 2004.

Second, two key cases have been working their way through the courts and culminated in two decisions in the Supreme Court of Canada in May 2003. Although these decisions were not directly related to insurance coverage for damages resulting from earthquakes, they appear essentially to effect the change requested by the IBC to allow property and casualty insurers to confidently exclude from their multi-peril policies coverage for fire following an earthquake (and also a terrorist act and nuclear incident). However, despite these decisions, it does not appear that any insurers have dropped coverage for fire following an earthquake from their multi-peril policies.

The British Columbia Insurance Act is based on uniform legislation that in general has been adopted by all provinces across Canada. The problem identified by the Supreme Court of Canada also arises under other provinces' insurance legislation.

In British Columbia, the need for a comprehensive review of the Insurance Act has been identified as part of the Ministry of Finance's Deregulation Plan. This review will commence after completion of several other high priority reviews, including the Financial Services Sector Legislative Review and the Real Estate Review.

Any Insurance Act review will require extensive consultation with the insurance industry, as well as consumers and the legal community. Any changes should also be done with due consideration of the need to streamline and harmonize legislative requirements across jurisdictions in Canada. This will require discussions with regulators and governments in other provinces.

Continued harmonization where at all possible is important as most insurers operate in two or more provinces; common rules are needed to help ensure that the insurance industry can operate efficiently. Insurance regulators across the country, through their national organization, the Canadian Council of Insurance Regulators, have appointed a committee to review the Supreme Court of Canada decisions and develop new harmonized legislation for multi-peril policies for consideration in all jurisdictions across Canada. The recommendation will be considered during that process, which is expected to be at least 2-3 years in duration.

8.3 Your committee recommends that the provincial government require insurers to take appropriate steps to draw to policy-holders' attention, on the face of insurance policies, the scope of coverage available with respect to damages resulting from earthquake.

Implementation Status *(Ministry of Finance): Partially Implemented – ongoing*

Comments: (Ministry of Finance):

- On August 31, 2001, the ministry indicated that it planned to proceed with public consultations on draft regulations requiring disclosure of the scope of coverage available respecting earthquake-related damage, to be held in conjunction with consultations noted in recommendation 8.2. As noted, the 8.2 consultations did not proceed.

  However, the ministry did send copies of proposed draft regulations to industry associations and regulators requesting their comments. Concerns were raised by the regulators about the effectiveness and impact of the proposed regulations. For example, requiring disclosure on the face of an insurance policy may not achieve the desired objective as most consumers generally fail to read their policies. As well, this type of disclosure could distort the general duty of insurance brokers to discuss all relevant aspects of the policy with their clients, including earthquake coverage. The industry associations did not respond to the request for comments. The recommendation will be considered during the development of new harmonized legislation for multi-peril policies for consideration in all jurisdictions across Canada (referred to in the response to recommendation 8.2 above). The development of that legislation is expected to take at least 2-3 years.

Improving the Seismic Capability of British Columbia's Infrastructure – Recommendation #9:

9.1 Your committee endorses the Auditor General's recommendations concerning the application of the seismic elements of the provincial building code, the provincial government's role in advising municipalities regarding the code, the identification of hazardous buildings and the upgrading of critical response facilities. Your committee encourages the provincial government and local governments to ensure that these recommendations are implemented as soon as possible.

Implementation Status: *Alternative Action*

Comments:

- While this recommendation is beyond the scope and authority of PEP, PEP endorses the committee's recommendations and encourages responsible ministries to meet these recommendations.
- Building codes and standards are the responsibility of the Ministry of Community, Aboriginal and Women's Services. PEP monitors the progress of the National Building Code of Canada, welcomes the changes in the 2005 building code and encourages the timely adoption of the new Code provincially.
- PEP endorses a review of Part 9 of the NBCC, and possible amendments to the BC Building Code.
- Implementation and enforcement of building codes is a local government jurisdiction.
- With the decommissioning of the Seismic Mitigation Branch, PEP encourages responsible ministries to maintain and enhance structural and non-structural mitigation initiatives.
- PEP endorses and encourages the Ministry of Transportation's initiatives in identifying and prioritizing upgrades to provincial bridges.
- PEP is working with the Ministry of Transportation to encourage the Canadian Standards Association to update the bridge standards in concert with the changes to the National Building Code of Canada.
- PEP encourages local governments to inventory, assess, and seismically upgrade critical infrastructure and hazardous sites within their jurisdictional boundaries.

Implementation Status

(Ministry of Community, Aboriginal and Women's Services): Substantially Implemented

Comments: (Ministry of Community, Aboriginal and Women's Services):

- Post Disaster Buildings:

  Building code provisions to require more stringent design and elements in small post-disaster buildings are being considered for the next edition of the BC Building Code. This edition is expected to be adopted in late 2005. The proposed revisions set the stage for construction that is more resistant to lateral loads of ambulance stations, police stations and community halls that serve as temporary shelters following a disaster.

  The upcoming edition of the code is the first opportunity to implement the recommendations of the committee.

- Advising local government

  The ministry will highlight changes to building code provisions relating to small post-disaster buildings in education and information materials associated with the adoption of the next edition of the BC Building Code. The education plan calls for information on code changes to be distributed throughout British Columbia, to both building officials working in local governments and to building code users in the design and construction phases of industry.

  This issue was highlighted during the 2003 review of changes to the BC and National Building Codes. The ministry was aggressive in its efforts to inform local governments and other code users of proposed changes to the BC and National Building Codes during the January to April review period.

- Identification of hazardous buildings

  This is beyond the scope of the activities of the ministry.

9.2 Your committee recognizes the work of Treasury Board (Capital Division) in evaluating, costing and prioritizing seismic upgrading of British Columbia's infrastructure.

Your committee encourages the provincial government to make the seismic upgrading of provincial infrastructure a priority in British Columbia and, in doing so, to recognize its moral and legal responsibility for the safety of the province's school children.

Implementation Status

(Ministry of Finance): Alternative Action

Comments: (Ministry of Finance):

- The Seismic Mitigation Program was initiated to provide assistance to public agencies to improve the seismic safety of existing and future public buildings. The pilot project ended March 31, 2003 and current and future requirements are being funded within the annual capital and operating budgets for each agency. For example, school district facilities are the responsibility of the Ministry of Education.

Implementation Status

(Ministry of Education): Partially Implemented

Comments: (Ministry of Education):

- During the four-year term (1999 to 2003) of the Ministry of Finance's Seismic Mitigation Program, over $63 million was provided to 39 school districts located in high seismic zones for non-structural and minor structural upgrading. This includes $17 million for non-structural upgrading.

The ministry has committed $41 million for seismic mitigation projects from 2001 to 2005. This includes capital funding of $29 million and operating grants of $12 million for minor structural upgrades.

The ministry is initiating the development of a seismic mitigation program with new funding announced in the 2006/07 year. The new funding includes $50 million for major capital expenditures and $15 million for non-structural and minor structural upgrading. The ministry is currently allocating $8 million a year in 2004/05 and 2005/06 for non-structural and minor structural upgrading.

The ministry will present funding options for a long-range seismic mitigation plan to Treasury Board for their consideration this fall.

During 2004, the ministry will be undertaking the following activities in preparation for its presentation to Treasury Board:

(a) Consultation with key stakeholders (i.e. British Columbia School District Secretary-Treasurers' Association, School Plant Officials' Association of British Columbia, Association of Professional Engineers and Geoscientists of British Columbia, Architectural Institute of British Columbia)

(b) Undertaking an assessment of all schools in the high-seismic of the province using a common seismic risk assessment tool

(c) Updating mitigation guidelines for structural and non-structural upgrading

(d) Developing evaluation criteria to help prioritize structural and non-structural seismic mitigation projects

(e) Investigating seismic inventory and project tracking requirements

(f) Developing an information strategy and resource requirements

9.3 Your committee recommends that seismic upgrading projects in schools include a consideration of non-structural damage mitigation measures, such as seismic restraint systems.

Implementation Status

(Ministry of Education): Partially Implemented

Comments: (Ministry of Education)

See comments for Recommendation 9.2

9.4 Your committee recommends that the provincial government ensure that all buildings that are designated as emergency centres meet current seismic standards.

Implementation Status

Alternative Action

Comments:

- While this recommendation is largely beyond the scope and authority of PEP, PEP endorses the recommendation and is actively working toward ensuring its own facilities meet post-disaster operability standards, and that best practises are applied at provincial and local government levels.
- PEP continues to work closely with Risk Management Branch on the development of Ministry Operations Centres (MOCs).
- PEP includes seismic recommendations within its Community Emergency Preparedness Review (CEPR) and a number of emergency management courses include information for local governments to follow in the development and implementation of their emergency centres. Where applicable, seismic considerations are included.

Natural Gas Hazards – Recommendation #10:

10.1 Your committee recommends that the provincial government encourage and promote tie-down programs for gas appliances and mobile homes, and examine the feasibility of mandating tie-downs in the applicable codes.

Implementation Status *Fully Implemented*

Comments:

- PEP will continue to work with Gas Utility companies to develop and publicly promote "guidelines" to mitigating the gas utility hazard in homes and the workplace. This is also part of PEP's overall public education program.
- Terasen Gas website includes, for example, specific direction regarding the strapping of hot water tanks and anchoring of other appliances.

10.2 Your committee recommends that the provincial government encourage and promote public education with respect to earthquake-related natural gas hazards.

Implementation Status *Fully Implemented*

Comments:

- This is an awareness project which continues to be acted upon by both local and provincial governments as well as the major gas utility company.

- The natural gas hazard associated with earthquakes is addressed in all seismic awareness and education initiatives at PEP.

How Do We Plan for Response to a Major Earthquake

British Columbia Earthquake Response Plan – Recommendation #11:

11.1 Your committee endorses the recommendations of the Auditor General regarding updating of the British Columbia Earthquake Plan and related regulations, development of a new communication strategy with respect to the plan, and the identification of potential sites for the Provincial Field Response Centre and an alternative location for the Provincial Emergency Coordination Centre. Your committee encourages the PEP to implement these recommendations.

Implementation Status

Fully Implemented

Comments:

BC Earthquake Response Plan

- The *Earthquake Response Plan* was revised and re-issued in 1999. It is currently being enhanced to reflect the BC Emergency Management Structure which is now in use B.C. See comments in previous sections above.

BC Crisis Communications Strategy for Major Provincial Emergencies

- Public Affairs Bureau (PAB), as a result of key recommendations in the Filmon Review as a result of Fire Season 2003, developed and implemented an enhanced all-hazard communications strategy called the "BC Crisis Communications Strategy for Major Provincial Emergencies." This new plan was successfully implemented, trained prior to, and used operationally in Fire Season 2004.
- The new strategy has broad-based applicability, including use for earthquakes. It links to all the provincial level hazard plans.
- Refer to recommendation 14.1 for details on a new telecommunications strategy.

Provincial Readiness

- PEP believes the emergency and disaster readiness status of the province as a whole has dramatically improved over the last five years.

- The existing BC Emergency Management Structure has demonstrated a robust capability to deal with large provincial level emergency management events, such as the 2003 interface fires and floods, the avian influenza outbreak of 2004, and fire season 2004.
- PEP now has five Provincial Regional Emergency Operations Centres (PREOCs) co-located with PEP regional offices that are ready to coordinate regional preparedness, planning, response and recovery to emergencies and disasters. These centres have been activated on numerous occasions in recent years. The fifth PREOC came on line in Terrace in the spring of 2004, and was subsequently activated to coordinate response to potential interface wildfires in the region shortly after. The sixth PREOC is co-located in Victoria. The Provincial Emergency Coordination Centre (PECC) at PEP HQ is also fully operational, with the PEP Emergency Coordination Centre (ECC) providing core staffing 24/7. The ECC received over 260,000 emergency calls in 2003. Kamloops PREOC remains fully operational as back-up should the PECC in Victoria require movement.
- The Temporary Emergency Assignment Management System (TEAMS), which has 120 staff from throughout government trained in emergency management and that staff PREOCs, has been a critical success factor in recent years.
- The development and implementation of the British Columbia Emergency Management Response System (BCERMS) as detailed in section 6.1 has been a critical success factor in recent events, and has greatly enhanced the emergency management in BC.
- BC Public Affairs Bureau has now developed and implemented a new provincial "BC Crisis Communications Strategy for Major Provincial Emergencies," which was very successful in fire season 2004.
- The implementation of all 42 recommendations in the 2004 Filmon Review has significantly increased provincial emergency management capabilities. In particular, the funding of new positions at PEP will further enhance provincial preparedness, response, and recovery capabilities.
- PEP is also working with its Federal partners and First Nations in establishing regionally based First Nations' emergency managers. These positions are an essential initiative in enhancing the BC Emergency Management Structure to support First Nations' emergency management in B.C.

Earthquake Response in Supporting Ministries and Schools – Recommendation #12:

12.1 Your committee endorses the Auditor General's recommendations concerning earthquake response planning in ministries with key support functions and the development of systems standards for resource management, and encourages the provincial government to ensure that steps are taken to implement these recommendations.

Implementation Status

Substantially Implemented

Comments:

- Ministry of Finance Risk Management Branch (RMB) has developed Business Continuity Policy, Standards, and Guidelines for all provincial ministries and ministry operations centres. RMB continues to work with, and provide provincial level leadership and best practises to, all ministries to educate, train and implement emergency preparedness, planning, response and recovery standards. RMB has also developed a virtual forum to share Business Continuity information.
- In regards to the provision of support and leadership prior to, during, and after provincial level emergencies and disasters, the provincial integrated response model is used. In recent significant events, the full resources of the province have been made available by the Premier's Office to provide whatever support is required during various emergencies or disasters (interface fire, flooding, avian influenza etc).

12.2 Your committee recommends that the provincial government encourage earthquake response planning and testing in all British Columbia schools, and to consider providing funding assistance for emergency supplies in all schools.

Implementation Status

(Ministry of Education): Fully Implemented

Comments: (Ministry of Education):

- Earthquake response planning and testing is the responsibility of individual school boards.
- In 1987, the ministry's Capital Planning Branch developed the "School Earthquake Safety Guidebook." The purpose of the guidebook is to assist school district staff, teachers, parents and students to make their schools safer, and to know what to do before and after an earthquake occurs.
- The Risk Management Branch, Ministry of Finance, manages the School Protection Program. In 2001, the Risk Management Branch surveyed all schools it had visited that year. This survey included a question about earthquake preparedness and evacuation procedures,

plans and practices and covered emergency preparedness generally, including fire drills and emergency evacuations for other purposes. For schools that were not visited in 2001, the fire, earthquake and emergency questions continue to be reviewed by inspectors during visits to these schools.

- Funding is allocated by the Ministry of Education to school boards to provide for the delivery and support of educational programs. Local school boards are responsible for managing health and safety matters and determining the priority of projects. School districts are responsible for emergency preparedness plans and undertaking work at schools to safeguard the well-being of students and staff.

12.3 Your committee notes the steps taken by the Ministry of Health to review and strengthen the ability of the health system to respond to a major earthquake, and encourages the ministry to continue its efforts in this regard, and in particular to consider the adequacy of British Columbia's ambulance services capacity.

Implementation Status

(Ministry of Health): Partially Implemented

- (Auditor General's comment: The Ministry of Health has provided a comprehensive response covering a wide range of emergency management issues. Rather than paraphrase its contents, the entire response is attached appears on page 62 to 65 of this report).

12.4 Your committee recommends that the provincial government encourage local government initiatives, as well as cooperation between industry and governments, with respect to hazardous materials planning.

Implementation Status

Fully Implemented

Comments:

- PEP continues to work with the Ministry of Water, Land, and Air Protection (WLAP), Oil and Gas Commission (OGC), the Fire Chiefs Associations of B.C., industry and all levels of government in support of integrated planning and cooperation in addressing a range of hazardous materials issues.
- PEP encourages partnerships between local government and industry through organizations such as Partnerships Towards Safer Communities (PTSC).
- Hazardous materials planning is part of the Hazard Risk and Vulnerability Analysis (HRVA) toolkit, and it is reviewed as part of an overall risk assessment for each local government.

Implementation Status

(Ministry of Water, Land and Air Protection): Partially Implemented

- The ministry endorses the Canadian Association of Fire Chiefs' "Partnerships towards Safer Communities" that provides a process and criteria to have local government and industry undertake joint risk assessments and response preparedness to enhance emergency preparedness to hazardous material spills and other threats, such as earthquakes. The ministry is part of a coordination committee to promote and guide this initiative for the Province of British Columbia. http://www.ptsc-program.org/
- The ministry has prepared and encourages the use of the BC Guidelines for Industry Emergency Response Plans (revised from 1992) by industries that pose a threat of a oil or hazardous material spill. The guidelines encourage industry to undertake risk assessments and to work with local government's first responders to establish an effective, cohesive response.
  http://wlapwww.gov.bc.ca/eeeb/indusguide/induscplan/html
- The ministry has undertaken a Community Preparedness Survey for Hazardous Materials (1998) that identified major gaps in local government capability to respond effectively to a major hazardous material incident.
  http://wlapwww.gov.bc.ca/eeeb/eephome/Hazmat 20Survey.pdf
- The ministry has identified in its 2004 service plan the strategic direction to facilitate "effective responses to high-risk environmental and human health and safety emergencies" by local government and industry by:
  - Responding effectively to high-risk environmental emergencies in conjunction with other ministries, local governments and industry.
  - Expanding industry responsibility for response to, and clean-up of, spills.
  - Testing industry, agency and ministry toxic spill emergency response plans.
    http://www.bcbudget.gov.b/c.ca/sp2004/wlap/wlap.pdf
- The ministry has undertaken a plan to develop a "Stewardship" model for industries that pose a spill threat, whereby various industrial sectors will garner a enhanced spill response capability with less reliance on government to respond.

12.5 Your committee recommends that provincial and local governments take steps to ensure adequate consideration is given to women's services in earthquake response planning.

Implementation Status — *Fully Implemented*

Comments:

- A multi-ministry plan was completed and distributed in January 2001. The plan is titled It Can Happen to your Agency/Tools for Change: Emergency Management for Women's Services. This best practises guide is available and applicable to a wide range of stakeholders.
- A copy of the plan can be obtained from the PEP Web site, www.pep.bc.ca.

Neighbourhood Programs – Recommendation #13:

13.1 Your committee recommends that the provincial government recognize the important role neighbourhood programs have to play in earthquake preparedness planning and response, and take steps to promote the development of more such programs in British Columbia.

Implementation Status — *Fully Implemented*

Comments:

- Local governments have primary responsibility for the establishment of Neighbourhood Emergency Preparedness Programs (NEPP).
- There is significant interest in these programs at the local government level and new programs are being started on an ongoing basis.
- PEP has supported these programs primarily by funding the development of training materials and generic public education material. The provincial support reduces the cost to local government.
- PEP will continue to provide this type of support.

Emergency Communications and Public Information – Recommendation #14:

14.1 Your committee endorses the recommendations of the Auditor General to the PEP and local governments with respect to updating communications equipment, emergency public information plans and communications plans, and acknowledges the PEP's efforts to upgrade equipment and update its communications and public information plans.

Implementation Status *Fully Implemented*

Comments:

Telecommunications Plans:

- A wide range of communications equipment has been installed in each of the permanent PREOCs. There is an ongoing requirement to monitor and introduce new technologies such as Voice Over Internet Protocols (VOIP) phones for each permanent operations centre.
- PEP continues to support the Provincial Emergency Radio Communications Volunteer service program as a key component within the "Public Safety Lifeline."

Emergency Public Alerting/Warning Systems:

- PEP continues to work with Industry Canada and all provincial and territorial emergency management organizations to research current and emerging public mass alerting technology and to develop standards in this regard.

  Public Affairs Bureau (PAB), as a result of key recommendations in the Filmon Review as a result of Fire Season 2003, developed and implemented an enhanced all-hazard communications strategy called the "BC Crisis Communications Strategy for Major Provincial Emergencies." This new plan was successfully implemented, trained prior to, and used operationally in Fire Season 2004. The new strategy has broad-based applicability, including use for earthquakes. It links to all the provincial level hazard plans.

14.2 Your committee encourages the PEP to complete its upgrading and updating efforts as soon as possible, and to ensure that these plans are updated on a regular basis. Your committee also encourages local governments to implement the Auditor General's recommendations with respect to emergency communications and public information plans.

Implementation Status *Substantially Implemented*

Comments:

- PEP now has five Provincial Regional Emergency Operations Centres (PREOCs) co-located with PEP regional offices that are ready to coordinate regional preparedness, planning, response and recovery to provincial level emergencies and disasters. These PREOCs have been activated on a number of occasions in recent years. The fifth PREOC came on-line in Terrace in the spring of 2004, and was subsequently activated to coordinate response to potential interface wildfires in the region shortly after. The sixth PREOC is co-located in Victoria. The Provincial Emergency Coordination Centre (PECC) at PEP HQ is also fully operational, with the PEP Emergency Coordination Centre (ECC) providing core staffing 24/7. The ECC received over 250,000 emergency calls in 2003. Kamloops PREOC remains fully operational as back-up should the PECC in Victoria require movement.
- The importance of emergency communications and also public information plans at local government is recognized by PEP and emergency managers throughout the province. PEP has incorporated both of these components into its HRVA toolkit and the CEPR checklist. Emergency Management training and written materials provided to local government also address these issues.

Interjurisdictional Coordination of Preparedness and Response Planning – Recommendation #15:

15.1 Your committee endorses the recommendations of the Auditor General to the PEP and local governments concerning cooperative efforts between the PEP, local governments, other provincial governments, the federal government and the Canadian Forces with respect to earthquake preparedness and response support plans, and encourages the PEP and local governments to implement these recommendations.

Implementation Status *Substantially Implemented*

Comments:

- Since the original report was written, BC has moved to an all-hazards model, which in recent years has proved extremely effective an efficient, both for preparedness, planning, response and recovery. A significant amount of training and exercising has all-hazards applicability [i.e. evacuation planning, developing and implementing an Emergency Operations Centre, developing and implementing a communications (i.e. media) plan etc]. PEP supports regular multi-jurisdictional hazard specific exercises, where a portion of the focus and "lessons learned" may be hazard specific.

- Grants are being provided by UBCM over the next three years ($2.5 million dollars over three years) to local and regional district governments to assist in local and regional government emergency planning (including exercising of the plans). The Justice Institute also received a one time grant of $300,000 to provide emergency management training.

- PEP continues to encourage and work with all levels of government to assess community hazards, risks, and vulnerabilities, including provision of a free to use web-based Hazard Risk and Vulnerability Analysis toolkit. PEP regional and HQ staff are also available to meet and assist local and regional governments with the use of the toolkit, and answer any emergency management questions that may arise.

- In the last two years PEP has increased its focus on reaching elected and senior officials at local government, as they were deemed to be essential recipients that messaging needed to be enhanced. Hundreds of local government elected and senior officials have since attended half day and day long emergency management workshops held province-wide. Successful initiatives such as these workshops and courses will continue in the future.

- PEP is also working with its Federal partners and First Nations in establishing regionally based First Nation's emergency managers. These positions are an essential initiative in enhancing the BC Emergency Management Structure to support First Nations' emergency management in B.C.

- As noted in Section 5.1, following the tabling of the Filmon Review in February 2004, PEP has received additional funding to establish 3 Senior Regional Managers, 2 Planning positions, a Manager of Emergency Training Programs, and 2 Integrated Recovery positions. These staff will further enhance PEP's ability to support local and regional district emergency management planning and exercising, and take part in multi-jurisdictional planning, training and exercising.

- PEP continues to work closely with federal stakeholders such as:

  - Natural Resources Canada on a range of earthquake preparedness and response initiatives. In 2004, results of a joint research initiative into earthquake probabilities in BC communities will be released.

  - the Canadian Hydrographic Services on a range of preparedness and response initiatives. Through 2003 and 2004, joint presentations on the BC earthquake and tsunami hazard took place on Vancouver Island, in the lower mainland, and in the Queen Charlotte Islands.

- the Canadian Forces (CF) in developing the CF national strategic level plan (PANORAMA), Area operational level plans (e.g. PALADIN-LCC, PHOENIX-ACC, CASCADIA-MCC) and tactical level plans (e.g. COUGAR – 39BGD; PELICAN).
- the Public Safety and Emergency Preparedness Canada (PSEPC) and other federal departments in developing coordinated and/or integrated preparedness, response, and recovery plans.
- PEP continues to support and encourage local governments to undertake earthquake planning through participation in such organizations as the Joint Emergency Liaison Committee, the Regional Emergency Planning Committee, the Regional Emergency Coordinators Committee, and the Mid-Island Emergency Coordinators Committee.

15.2 Your committee acknowledges the Provincial Emergency Program's efforts in coordinating the "Thunderbird 4 – Cascadia Response" exercise in March 1999, and recommends that the provincial government encourage more joint earthquake response exercises by the Provincial Emergency Program, Emergency Preparedness Canada and the Canadian Forces, including regular exercises around the National Earthquake Support Plan and its relationship to British Columbia's plans.

Implementation Status

Substantially Implemented

Comments:

- PEP recognises the requirement to validate plans by conducting validation exercises. This includes ongoing inter-agency training initiatives and education.
- PEP has adopted a pro-active posture in committing to participation whenever possible in exercises conducted by both local and federal government and non-government agencies, such as BC Hydro and BC Gas.
- PEP participates in a myriad of validation exercises each year. PEP in coordination with partnering agencies regularly develops and takes part in earthquake, volcano and tsunami exercises. The frequency of these exercises is within an all-hazards context.
- PEP actively participates in a major multi-jurisdictional earthquake exercise on average every four years.

- PEP will continue its annual tsunami exercises (SEASWELL series) once a review of the current response system is completed and recommendations are implemented. PEP tests its tsunami notification system quarterly.
- PEP has acquired funding for and staffed a permanent Training Officer position. This staff member will focus on integrating PEP exercise planning and scheduling with that of other agencies, to maximize training and testing opportunities.
- PEP also supports all hazards integrated training and education, as these are essential components associated with exercises.

15.3 Your committee endorses the Auditor General's recommendations to local governments and the PEP with respect to local government planning and testing, and encourages implementation of these recommendations.

Implementation Status

Fully Implemented

Comments:

- PEP continues to encourage and work with local governments to assess community hazards, risks, and vulnerabilities, including provision of a free to use web-based Hazard Risk and Vulnerability Analysis (HVRA) toolkit. PEP regional and HQ staff are also available to meet and assist local and regional governments with the use of the toolkit, and answer any emergency management questions that may arise. Joint emergency management presentations are also provided as requested.
- Wherever and whenever possible PEP will work with local governments (and other partners including other provincial players and the federal government), in developing, implementing, taking part in, and reviewing local government exercises and their related plans.
- Legislative changes to the Emergency Program Act in May of 2004 now require by law Regional District involvement in Emergency Planning.
- Grants are being provided by UBCM over the next three years ($2.5 million dollars over three years) to local and regional district governments to assist in local and regional government emergency planning. The Justice Institute also received a one time grant of $300,000 to provide emergency management training.
- PEP has developed and presented to local and regional governments Elected Officials and Senior Emergency Officials Workshops on emergency management in BC.

- PEP is also working with its Federal partners and First Nations in establishing regionally based First Nations' emergency coordinators. These positions are an essential initiative in enhancing the BC Emergency Management Structure to support First Nations' emergency management in B.C.
- As noted in Section 5.1, following the tabling of the Filmon Review in February 2004, PEP has received additional funding to establish 3 Senior Regional Managers, 2 Planning positions, a Manager of Emergency Training Programs, and 2 Integrated Recovery positions. These staff will further enhance PEP's ability to support local and regional district emergency management planning.
- PEP continues to actively encourage regional emergency planning through such organizations as the Joint Emergency Liaison Committee (JELC), its numerous emergency planning subcommittees, and the Regional Emergency Planning Committee (REPC) in the lower mainland; the Regional Emergency Coordination Committee (RECC) in greater Victoria and the Mid-Island Emergency Managers Committee in central Vancouver Island.

15.4 Your committee recommends that future testing of earthquake response plans involve participation by urban search and rescue teams.

Implementation Status

Alternative Action

Comments:

- Urban Search and Rescue (USAR) Teams belong to local governments. The local governments participating in earthquake response exercises have always been given the latitude to fully exercise any of their resources as they see fit.
- A review of the scope and utility of Urban Search and Rescue is required.
- PEP strongly supports Search and Rescue as a critical component of the Public Safety Lifeline.
- The establishment of light, medium and heavy USAR teams is the responsibility of local government.
- PEP in cooperation with the Joint Emergency Liaison Committee is working towards reviewing USAR needs in the Lower Mainland and analyzing various opportunities to ensure the needs are met.

Emergency Planning and Response Training – Recommendation #16:

16.1 Your committee endorses the Auditor General's recommendations to the PEP with respect to training for emergency planning and response positions at the provincial and local government levels, acknowledges the efforts undertaken by the Provincial Emergency Program to develop and offer emergency management training through the Justice Institute, and encourages the PEP to ensure that the Auditor General's recommendations with respect to training be implemented.

Implementation Status *Fully Implemented*

Comments:

- The province continues to fund the provision of training through the Justice Institute, Emergency Management Division, in the amount of $250,000 per year.
- In addition, PEP encourages local governments to fund their own fee-for-service training.
- PEP provides direction and support for the development of training standards.
- As noted in Section 5.1, following the tabling of the Filmon Review in February 2004, PEP has received additional funding to establish 3 Senior Regional Managers, 2 Planning positions and 2 Integrated Recovery positions and a Manager of Emergency Training Programs. These staff will further enhance PEP's ability to support provincial, local and regional district emergency management training requirements.
- Grants are being provided by UBCM over the next three years ($2.5 million dollars over three years) to local and regional district governments to assist in local and regional government emergency planning. The Justice Institute also received a one time grant of $300,000 to provide emergency management training.

16.2 Your committee recommends that the provincial government review relevant legislation and policies to ensure that there are no legislative, regulatory or other impediments to the provision of adequate emergency training and certification to enable emergency medical assistants to provide effective assistance in the event of a major earthquake.

Implementation Status *Fully Implemented*

Comments:

- Research has confirmed that there is no impediment to utilising trades and/or medical people certified in another jurisdiction in BC, once a State of Emergency has been declared.

Planning for Recovery from an Earthquake

Post-Earthquake Damage Assessment, Debris Removal and Reconstruction – Recommendation #17:

17.1 Your committee endorses the recommendations of the Auditor General to the PEP concerning development of a damage assessment plan, and communication thereof, and encourages the PEP to implement this recommendation.

Implementation Status *Substantially Implemented*

Comments:

- Damage assessment at provincial level, as defined by the British Columbia Emergency Response Management System (BCERMS) is generally correlated beginning with information from site level sent to local government site support level [i.e. local government Emergency Operations Centre (EOC)], site support to regional support level [i.e. Provincial Regional Emergency Operations Centre (PREOC)], and from regional support level to central support level [i.e. the Provincial Emergency Coordination Centre (PECC)]. Each support level then utilizes the information to provide support to the level below. This manner of collecting damage assessment has been extremely successful and has all-hazards applicability, as demonstrated in fire season 2003 and 2004, fall flooding 2003, and the avian influenza outbreak of spring 2004. Although it is recognized a large earthquake may pose additional challenges, damage assessment will generally follow these fundamentals as detailed in BCERMS.
- Broad-based emergency management training and exercising in British Columbia supports these fundamentals.
- As a large scale earthquake may pose additional challenges, additional damage assessment requirements and capabilities are being determined and implemented where necessary (see section 17.3)
- Public Affairs Bureau (PAB), as a result of key recommendations in the Filmon Review as a result of Fire Season 2003, developed and implemented an enhanced all-hazard communications strategy called the "BC Crisis Communications Strategy for Major Provincial Emergencies." This new plan was successfully implemented, trained

prior to, and used operationally in Fire Season 2004. The new strategy has broad-based applicability, including use for earthquakes. It links to all the provincial level hazard plans.

- It is recognized "newer" technologies such as the web are now used heavily by people to disseminate critical information. The PEP website is an integrated website, that promotes all hazard preparedness, planning, response and recovery at all levels. The website is recognized internationally for the comprehensive real-time information it lists. This information applies to earthquakes as one of 57 hazards. At the peak of fire season 2003, the two PEP servers housing the website had 1.4 million "hits" a day. Castanet, a locally run website in Kelowna, also had 1 million "hits" a day at the peak of the fires.

17.2 Your committee endorses the Auditor General's recommendation that the PEP pursue the recommendations contained in the Joint Emergency Liaison Committee's interim report with respect to post-earthquake structural assessment, and encourages the PEP to take steps to implement this recommendation.

Implementation Status — *Partially Implemented*

Comments:

- While PEP recognizes the need to develop a structural damage assessment program, it agrees with the Joint Emergency Liaison Committee (JELC) Technical Review Committee's 2003 findings identifying short-comings in the JELC structural assessment committee's plan.
- PEP supports the development of a structural damage assessment plan in the context of and to be integrated with the larger damage assessment program referred to in the comments to recommendation 17.1.

17.3 Your committee endorses the recommendations made by the Auditor General to the PEP with respect to advising local governments on post-earthquake building inspection, debris removal and reconstruction, and encourages the PEP to implement these recommendations.

Implementation Status — *Partially Implemented*

Comments:

- **Critical Infrastructure Identification:** PEP supports and encourages local governments to identify critical infrastructure and prioritise planned response to expedite recovery. PEP has hired a new Critical Infrastructure Planning Officer to assist in detailing key critical infrastructure information. This position will also be working closely with Federal stakeholders.
- **Damage Assessment:** See PEP comments in reference to recommendations 17.1 and 17.2.
- **Debris Removal:** PEP continues to work with JELC and local governments to develop a template for community debris removal planning to test and validate the template in the lower mainland and to share the template with other jurisdictions around the province. The plan is currently being validated through a debris removal exercise.
- **Reconstruction Plans:** A community recovery management planning framework document has been drafted and the consultation process is under way.
- Currently, PEP adopts and recommends the adoption of ATC-20, a structural damage assessment program in use in the USA, to all ministries, crown corporations, local and regional governments.

17.4 Your committee endorses the Auditor General's recommendations to local governments with respect to planning for post-earthquake damage assessment, infrastructure inspection, debris removal and reconstruction, and encourages local governments to implement these recommendations.

Implementation Status

Alternative Action

Comments:

- PEP continues to encourage and support local and regional governments in their efforts to develop comprehensive, integrated emergency plans, including preparedness, response and recovery components. PEP continues to demonstrate provincial level leadership and support in this regards.

Business Continuation Planning – Recommendation #18:

18.1 Your committee acknowledges the work done by the Risk Management Branch of the Ministry of Finance and Corporate Relations with respect to business continuation planning and coordination with the PEP, endorses the Auditor General's recommendations to the provincial government in this regard, and encourages the provincial government to ensure that the Auditor General's recommendations are fully implemented.

Implementation Status

(Ministry of Finance): Substantially Implemented

Comments: (Ministry of Finance):

- The Business Continuity Management Program (BCMP) is currently underway. Ministries have responsibility for the BCMP in accordance with the Core Policy Manual, Chapter 16.
- Business Continuity Coordinators form the Government BCMP Advisory Committee that meets quarterly to report on BCMP activities and discuss relevant crisis management topics. Crowns and government agencies participate on the committee.
- Ministries provide semi-annual reports to Risk Management Branch and Government Security Office (RMB) regarding plan updates and exercises as well as their mission critical and business priorities. An annual report is presented to the Deputy Ministers' Council on the status of government-wide business continuity planning.
- Ministry plans provide the foundation for the Government Business Continuity Plan. This plan provides a process to recover government services that may be interrupted during a wide spread emergency or disaster.
- Risk Management Branch continues to coordinate a two-week BCMP Certification course for coordinators and planners which is provided by a recognized service provider. The training provides BCMP fundamentals and a certification exam. This course has been offered annually since June 2001 and is open to all public sector and private sector organizations subject to available seating.
- Risk Management Branch has developed comprehensive guidelines for establishing a Business Continuity Management Program in a government organization. The guidelines are posted to the Risk Management Branch intranet website.

- Risk Management Branch has established a virtual forum for all employees involved in BCMP activities. The website was established to share and exchange information, as well as collaborating on questions and answers, including any new BCMP initiatives.
- The Government BCMP Advisory Committee has formed work groups to develop the standard templates and best practices for business continuity plans and ministry operations centres.
- Risk Management Branch co-chairs the Inter-Agency Emergency Preparedness Council with PEP to facilitate communication, coordination of resources, application of common methodologies and promotion of emergency preparedness in British Columbia.

18.2 Your committee endorses the recommendations made by the Auditor General to the provincial government, the PEP and local governments concerning business continuation planning, encourages implementation of those recommendations, and recommends that the PEP work cooperatively with local governments to develop guidelines for local government business continuation plans.

Implementation Status *(Ministry of Finance): Partially Implemented*

Comments: (Ministry of Finance):

- Providing guidelines to local governments for the development of business and continuation plans is not a direct provincial government responsibility. However, progress is being made on coordinating emergency response and consequence management at all levels of government for improving emergency preparedness measures, including business continuity management.
- The Core Policy Manual Chapter 16 regarding Business Continuity Management and supporting guidelines have been provided where requested to local governments to assist with the development of Business Continuity Plans.

Funding Earthquake Recovery Costs – Recommendation #19:

19.1 Your committee endorses the Auditor General's recommendation to the provincial government with respect to preparing for and mitigating its financial liabilities following a major earthquake, and encourages the provincial government to ensure that this recommendation is implemented.

Implementation Status *(Ministry of Finance): Fully Implemented*

Comments: (Ministry of Finance):

- In general, the province is satisfied that existing arrangements and agreements regarding mitigation of earthquake risks are adequate.
- In the event of a large scale disaster in British Columbia, the Government of Canada can provide financial assistance through the Disaster Financial Assistance Arrangements to help the province meet the basic costs of response and recovery when such expenditures exceed what the province could reasonably be expected to bear on its own.
- The Compensation and Disaster Financial Assistance Regulation enables the government of British Columbia to compensate citizens for lost or damaged land or personal property acquired by the government under the Emergency Program Act. The regulation defines the circumstances under which such compensation may be paid and the thresholds that apply to such payments.
- There is, however, considerable on-going work in this topic, including the review of cost-sharing arrangements with the federal government to assess their sustainability over time.

19.2 Your committee recommends that the provincial government educate British Columbians about the fact that public funds will generally not be available to compensate for losses to private property resulting from earthquake, and that public funds will only be available to restore and replace public infrastructure.

Implementation Status

Fully Implemented

Comments:

- There has been some increase in public awareness over the last year and insurance companies have advertised the availability of earthquake insurance.
- The Ministry of Finance has conducted a survey of BC residents.

Developing Implementation Strategies and Reporting Back on Progress – Recommendation #20:

20.1 Your committee recommends that the provincial government, in particular the Provincial Emergency Program, move with dispatch in developing strategies to address the recommendations contained in this report.

Implementation Status *Fully Implemented*

20.2 Your committee recommends that representatives of the Provincial Emergency Program re-attend before the committee no later than December 31, 1999, in order to provide information regarding progress made in implementing the recommendations contained in this report.

Implementation Status *Fully Implemented*

PAC discussed the first follow-up report on May 16, 2000.

BRITISH COLUMBIA

MAR 17 2004

488190

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Victoria BC V8V 1X4

Dear Bill Gilhooly:

In response to your letter dated February 11, 2004, I am pleased to provide an update on the progress being made towards improving the earthquake preparedness of the provincial health services system.

The Ministry of Health Services has previously reported progress three times to the Standing Committee on Public Accounts Committee (PAC). The PAC recommendations encouraged the Ministry of Health to continue its efforts to strengthen the ability of the system to respond to a major earthquake and to consider the adequacy of the capacity of the BC Ambulance Service.

Ministry Progress:

The Ministry of Health Services, Emergency Management Branch provides the leadership and on-going stewardship of a system-wide comprehensive emergency management approach to all-hazard preparedness. In this regard, the ministry has adopted an emergency management structure (Annex A) that incorporates the operational elements of the British Columbia Emergency Response Management System (BCERMS).

To ensure health authorities are undertaking integrated and comprehensive emergency planning, the ministry has established a Health Emergency Management (HEM) Council with representation from health authorities to foster 'best practice' in emergency management. In addition, a HEM network has been created as a vehicle for the exchange of "best practice" information exchange among the provinces health emergency management practitioners. Over the next year, the Emergency Management Branch will undertake an analysis of health sector critical infrastructure, building the work done during the Y2K, to promote an enhanced awareness of the interface between business continuity and emergency planning. Furthermore, the ministry intends to establish emergency preparedness as an accountability criterion for both health authorities and internal divisions. Through the HEM Council, ministry and health

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authority representatives are able to routinely review and update 'best practices' based on new information, from exercises and management of local emergencies.

During the past 12 months the health system has been confronted by and effectively responded to Severe Acute Respiratory Syndrome (SARS), the impact of Fire Storm 2003, the threat of West Nile Virus, Bovine Spongiform Encephalopathy (BSE), and professional health services withdrawal that impacted entire communities. Lessons learned from these events are being reviewed with a view to implementing those procedures that will enable the ministry to better execute its crisis and consequence management role in pan-provincial emergencies and disasters.

Under the leadership of the Provincial Health Officer, the ministry is working with Health Canada and other pan-Canadian partners in developing the tools deemed necessary to deal with the influenza pandemic predicted within the next decade. As was previously reported, the potential effects of such an occurrence on the health system will, in some aspects, exceed those of a severe earthquake, as both the breadth of the impact and duration would be considerably greater. In this regard, the province has developed the *British Columbia Pandemic Influenza Preparedness Plan: Guidelines for Planning Response and Recovery* that contains many elements in common with an earthquake or other wide area disaster plan.

While the ministry continues to address the safety of personnel through non-structural mitigation initiatives the seismic upgrading of ministry infrastructure falls within the domain of the BC Buildings Corporation.

Health Authority Progress:

Progress in earthquake-specific emergency preparedness continues to vary considerably among health authorities, with the greatest progress being achieved among those in the highest risk earthquake zone. Many of these have benefited from having staff dedicated to the emergency preparedness function. The overall state of readiness of health authorities continues to improve through activities ranging from system-wide regional planning to individual emergency preparedness training for staff. The Vancouver Coastal and Interior Health Authorities have recently had elements of their emergency response management systems tested as the result of SARS and 2003 wildland-urban interface fires which provided invaluable experience in crisis and consequence management.

Health authorities at risk continue to make progress in addressing issues around earthquakes mitigation, particularly non-structural, promoting employee safety and program resilience. Structural issues are being addressed as and when the necessary project funding becomes available. For example, Vancouver Island Health Authority has undertaken an aggressive program of installing seismic gas valves, upgrading system restraints and removal of redundant equipment; and 85 percent of the St. Paul's Hospital Burrard Building's non-structural external

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architectural elements identified as high priority in the Seismic Mitigation Program's SMARTS system have been seismically mitigated.

The ministry is generally satisfied with the progress being made in disaster preparedness throughout the health services system, particularly as it is occurring in a climate of escalating management challenges and diminishing resources. It is important to note that ability of the health system to respond to a large disaster is dependent on the combined capacity of communities and the health system to manage the resulting increase patient load or 'surge' which is a challenge of monumental proportions given the finite nature of health system resources.

British Columbia Ambulance Service Progress:

British Columbia Ambulance Service (BCAS) continues to refine and improve its Multi-Casualty Incident (MCI) Plan to enable the service to rapidly triage, treat and transport casualties resulting from a major emergency or disaster. In addition, BCAS has acquired the necessary equipment and training to provide an initial emergency medical response to a terrorist chemical, biological or radio nuclear (CBRN) event in either the Capital or Greater Vancouver regional districts.

Planned Projects:

Over the next year the ministry will:

- work with health authorities to develop partnerships with local governments in creating community self-sufficiency in dealing with minor injuries/illness immediately following an emergency or disaster. The longer-term goal being systemic emergency preparedness is to restore services to optimum capacity and improve utilization management in order to improve emergency response capabilities;
- undertake, in conjunction with health authorities, an analysis of emergency communication and information management requirements with a view to developing a provincial health emergency management communications system with appropriate redundancies to ensure disaster resilience;
- continue to work with Health Canada in the management of the provincial component of the National Emergency Stock Pile System comprised of 16 emergency hospitals, 40 advanced treatment centers, 96 casualty collection units and a pharmaceutical stockpile; and
- work with health authorities, bordering provincial and international (US) jurisdictions in establishing a mechanism for the provision of mutual assistance in emergencies and disasters.

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Conclusion:

Continuing progress in generic, all-hazards emergency planning is being achieved across the health services system. The Ministry of Health Services will continue to provide direction, encouragement and leadership to the health services system to ensure continuing progress in earthquake preparedness.

Should you have any questions or require further clarification please contact Wayne Dauphinee, Executive Director, Emergency management Branch at 250-952-1700.

Sincerely,

Penny Ballem, MD
Deputy Minister

pc: The Honourable Colin Hansen, Minister of Health Services

Appendices

Appendix A

Earthquake Preparedness

Timetable of Reports Issued and Select Standing Committee on Public Accounts on Earthquake Preparedness

Reports

The Auditor General issued the report on December 18, 1997. The report contained nine strategic recommendations and 51 operational recommendations.

The Select Standing Committee on Public Accounts (PAC) reviewed the report on October 21, 1998. The afternoon session of this meeting was a public hearing to receive the comments of interested members of the community at large.

PAC held further a further public hearing in Richmond on October 26, 1998.

PAC discussed its draft report on earthquake preparedness at meetings on March 30, April 13, April 27, May 11, June 1 and June 8, 1999.

On July 7, 1999, PAC presented its report to the Legislative Assembly. The report contained twenty recommendation topic areas for which a total of forty-seven recommendations were made. Twenty-four of these recommendations endorsed the sixty recommendations contained in the Auditor General's report, and the remaining twenty-three represented recommendations that PAC added to those of the Auditor General.

Follow-up on the Auditor General's report

The Auditor General reported on the status of implementation of the nine strategic recommendations in May 1999 in 1999/2000 Report 1, *Follow-up of Performance of Audits/Studies*. PAC met to consider this report on May 16, 2000 but did not formally report the results of its review to the Legislative Assembly.

First follow-up on PAC's report

The Auditor General reported on the status at March 31, 2002 of implementation of the recommendations included in PAC's report. This report was delivered to the Clerk of Committees in July 2002. This report was not reviewed in detail by PAC.

Second follow-up on PAC's report

This report is the second follow-up report on PAC's recommendations.

Appendix B

Select Standing Committee on Public Accounts – Legislative Assembly of British Columbia: Guide to the Follow-Up Process

About the Committee

The Select Standing Committee on Public Accounts is an all-party select standing committee of the Legislative Assembly. The committee is currently composed of 14 members, including a Chair and Deputy Chair. The committee is supported in its work by the Office of the Clerk of Committees, which provides procedural advice, and administrative and research support.

The committee's Terms of Reference include, but are not limited to, the following powers:

- Consider all reports of the Auditor General which have been referred to the committee by the Legislative Assembly
- Sit during a period in which the House is adjourned or recessed
- Send for persons, papers and records
- Report to the House on its deliberations.

Committee Meetings

Dates of committee meetings are posted on the Legislative Assembly web site at www.leg.bc.ca/cmt/. Committee proceedings are recorded and published in *Hansard*, which is available on the same web site.

The Auditor General and the Comptroller General are officials of the committee, and are usually present at committee meetings. During meetings, representatives of the Auditor General's office make a presentation of their audit findings.

Representatives of audited organizations also attend as witnesses before the committee, and provide information to the committee regarding actions taken to address the Auditor General's recommendations. Following each presentation, committee members are provided with the opportunity to ask questions of witnesses. Members of the Legislative Assembly may examine, in the same manner, witnesses, with the approval of the committee.

After initial consideration of a report, the committee often wishes to follow-up the progress made in implementing the Auditor General's recommendations, or recommendations made by the committee to the House, and adopted by the House. The procedures for follow-up reviews carried out by the Auditor General are outlined below.

The Follow-up Process

1. About twelve months after an audited organization's appearance before the committee, representatives of the Auditor General's office will request representatives of the audited organization that a progress update be provided to the Office of the Auditor General within a period of time (usually one month).
2. Audited organizations must prepare a written response in the format noted below, and direct it to the Office of the Auditor General. In drafting the written response, organization representatives may wish to consult with the Office of the Comptroller General, and/or the Office of the Auditor General. As well, the Office of the Clerk of Committees would be pleased to answer any questions regarding the work of the committee, and committee procedure.
3. All written responses submitted by audited organizations are reviewed by the Office of the Auditor General to confirm the fairness of information about the progress made in implementing the recommendations contained in the Auditor General's report.
4. After completion of his review, the Auditor General issues a report to the Legislative Assembly, which includes the Auditor General's opinion on the status provided by the organization. The report is referred to the Select Standing Committee of Public Accounts.
5. Following review of the Auditor General's report, the committee may request that representatives of the audited organization appear before the committee to provide further information, or that further information be provided to the committee in written form.
6. The Office of the Comptroller General will arrange for witnesses to attend where the committee has asked for a presentation based on the written followup.

Format of Written Responses

Written follow-up information prepared by audited organizations in response to a request from the Office of the Auditor General should include the following items:

- Date of the written response.
- A brief introduction to and summary of the topic being considered, including a reference to the period during which the audit was

conducted, date(s) the audit was considered by the Public Accounts Committee, and how many of the recommendations have been fully implemented, substantially implemented, partially implemented, alternative action taken and no action taken to date.

- A brief response to each recommendation made by the Auditor General and by the Public Accounts Committee (unless specifically advised to address only particular recommendations), including all actions taken to implement each recommendation.
- A work plan for implementation of the Auditor General's and the Public Accounts Committee's recommendations, including information on the means by which each recommendation will be implemented, time frames for implementation, identification of branches with primary responsibility for implementation, and procedures in place to monitor progress in implementing the recommendations.
- Any other information relevant to the Auditor General's or Public Accounts Committee's recommendations, including planned or current projects, studies, seminars, meetings, etc.
- Contact information for ministry/government organization representatives who have primary responsibility for responding to the Auditor General's and Public Accounts Committee's recommendations (name, title, branch, phone and fax numbers, e-mail address).
- The reports are to be signed by a senior official responsible for the area, normally a Deputy Minister, an Assistant Deputy Minister or Vice-President.
- Reports should be relatively brief (e.g. 5–10 pages), although attachments are acceptable. If guidance is needed in preparing the follow-up report, please contact any of the offices noted below.

Contact Information:

Office of the Clerk of Committees
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Appendix C

Office of the Auditor General: Follow-up Objectives and Methodology

Purpose of Following Up Audits

The Office conducts follow-up reviews in order to provide the Legislative Assembly and the public with information on the progress being made by government organizations in implementing the recommendations arising from the original work.

Performance audits are undertaken to assess how government organizations have given attention to economy, efficiency and effectiveness.

The concept of performance audits is based on two principles. The first is that public business should be conducted in a way that makes the best possible use of public funds. The second is that people who conduct public business should be held accountable for the prudent and effective management of the resources entrusted to them.

The Nature of Audit Follow-ups

A follow-up of an audit comprises:

1. requesting management to report the actions taken and to assess the extent to which recommendations identified in the original audit report have been implemented;
2. reviewing management's response to ascertain whether it presents fairly, in all significant respects, the progress being made in dealing with the recommendations;
3. determining if further action by management is required and, consequently, whether further follow-up work by the Office will be necessary in subsequent years; and
4. reporting to the Legislative Assembly and the public the responses of management and the results of our reviews of those responses.

While a follow-up of an audit focuses on progress made, it is not intended to assess whether or not the rate of progress has been satisfactory.

The Nature of a Review

A review is distinguishable from an audit in that it provides a moderate rather than a high level of assurance. In our audits, we provide a high, though not absolute, level of assurance by designing procedures so that the risk of an inappropriate conclusion is reduced to a low level. These procedures include inspection, observation, enquiry, confirmation, analysis and discussion. Use of the term "high level of assurance" refers to the highest reasonable level of assurance auditors provide on a subject. Absolute assurance is not attainable since an audit involves such factors as the use of judgement, the use of testing, the inherent limitations of control and the fact that much of the evidence available to us is persuasive rather than conclusive.

In a review, we provide a moderate level of assurance by limiting procedures to enquiry, document review and discussion, so that the risk of an inappropriate conclusion is reduced to a moderate level and the evidence obtained enables us to conclude the matter is plausible in the circumstances.

Scope of Audit Follow-ups

The follow-ups focus primarily on those recommendations that are agreed to by management at the time of the original audit or study. Where management does not accept our original recommendations, this is reported in managements' responses to the original audit reports. Since our reports are referred to the Legislative Assembly's Select Standing Committee on Public Accounts, management's concerns with our recommendations in some cases are discussed by the committee, which may also make recommendations for future action. If the committee endorses our recommendations, we include them in a follow-up. We also include any other recommendations made directly by the committee.

Frequency of Reporting on Audit Follow-ups

We follow the process agreed to between the Office of the Auditor General, the Office of the Controller General and the Public Accounts Committee (Appendix A).

Review Standards

We carry out our follow-up reviews in accordance with the standards for assurance engagements established by the Canadian Institute of Chartered Accountants.

Methods of Obtaining Evidence

Our reviews involve primarily enquiry, document review and discussion.

Enquiry consists of seeking appropriate information of knowledgeable persons within or outside the entity being audited. Types of enquiries include formal written enquiries addressed to third parties and informal oral enquiries addressed to persons within the entity. Consistent responses from different sources provide an increased degree of assurance, especially when the sources that provide the information are independent of each other.

Document review consists of examining documents such as minutes of senior management meetings, management plans, and manuals and policy statements to support assertions made in management's written report.

Discussion consists primarily of interviews with key management and staff, as necessary, for further verification and explanation.

Appendix D

Office of the Auditor General: 2005/2006 Reports Issued to Date

Report 1 – April 2005

Follow-up of the Recommendations of the Select Standing Committee on Public Accounts contained in its Fourth Report of the 3rd Session of the 36th Parliament: Earthquake; Performance Audit

This report and others are available on our website at http://www.bcauditor.com

Compiled and typeset by Graphic Designer, Debbie Lee Sawin, of the Office of the Auditor General of British Columbia
and published by the Queen's Printer for British Columbia©
Victoria 2004